

INTER-AMERICAN TROPICAL TUNA COMMISSION COMISION INTERAMERICANA DEL ATUN TROPICAL

Data Report — Informe de Datos

No. 2

**OCEANOGRAPHIC OBSERVATIONS IN THE GULF OF
GUAYAQUIL, 1962-1964.**

PART 2. BIOLOGICAL, CHEMICAL AND PHYSICAL

**OBSERVACIONES OCEANOGRAFICAS EN EL GOLFO DE
GUAYAQUIL, 1962-1964.**

PARTE 2. BIOLOGICA, QUIMICA Y FISICA

La Jolla, California

1968

The **Inter-American Tropical Tuna Commission** was established by a Convention between the Governments of the Republic of Costa Rica and the United States of America. The Convention entered into force in 1950. The Commission's duties under the Convention (Art. II, 1.) include the conduct of:

"Investigations concerning the abundance, biology, biometry, and ecology of yellowfin (*Neothunnus*) and skipjack (*Katsuwonus*) tuna in the waters of the eastern Pacific Ocean . . . and the kinds of fishes commonly used as bait in the tuna fisheries . . . and of other kinds of fish taken by tuna fishing vessels; and the effects of natural factors and human activities on the abundance of the populations of fishes supporting all of these fisheries."

and to

"Recommend from time to time, on the basis of scientific investigations, proposals for joint action . . . designed to keep populations of fishes covered by this Convention at those levels of abundance which will permit the maximum sustained catch."

The Commission initiated its investigations, which are conducted by a permanent international scientific staff, in 1951.

Provision is made in the Convention (Art. V, 3.) for:

"Any government, whose nationals participate in the fisheries covered by this Convention . . . Upon receiving the unanimous consent of the High Contracting Parties . . ."

to adhere. Under this provision the Republic of Panama adhered in 1953, the Republic of Ecuador in 1961, and the United Mexican States in 1964.

Commissioners serving at the time of publication are:

COSTA RICA

José L. Cardona-Cooper
Fernando Flores
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Victor Nigro

MEXICO

Mauro Cárdenas F.
Héctor Chapa S.
Juan Luis Cifuentes L.
Maria Emilia Téllez B.

La **Comisión Interamericana del Atún Tropical** fue establecida por una Convención entre los Gobiernos de la República de Costa Rica y los Estados Unidos de América. La Convención entró en vigencia en el año de 1950. Las obligaciones de la Comisión bajo la Convención (Art. II, 1.) incluyen:

"Llevar a cabo investigaciones sobre la abundancia, biología, biometría y ecología de los atunes de aletas amarillas (*Neothunnus*) y bonitos (*Katsuwonus*) de las aguas del Pacífico Oriental . . . como también de las clases de pescado que generalmente se usan como carnada en la pesca del atún . . . y otras clases de peces que pescan las embarcaciones atuneras; y asimismo sobre los efectos de los factores naturales y de la acción del hombre en la abundancia de las poblaciones de peces que sostengan a todas estas pesquerías."

como también

"Recomendar en su oportunidad, a base de investigaciones científicas, la acción conjunta necesaria . . . para fines de mantener las poblaciones de peces que abarca esta Convención en el nivel de abundancia que permita la pesca máxima constante."

La Comisión inició sus investigaciones, las cuales son conducidas por un personal científico internacional permanente, en 1951.

Existe una disposición en la Convención (Art. V, 3.) por medio de la cual:

"Todo gobierno cuyos nacionales tomen parte en las operaciones de pesca que abarca esta Convención . . . Al recibir el consentimiento unánime de las Altas Partes Contratantes . . ."

puede adherirse. Bajo esta cláusula la República de Panamá se adhirió en 1953, la República del Ecuador en 1961 y los Estados Unidos Mexicanos en 1964.

Los Delegados vigentes en la presente edición son:

ECUADOR

Luis Pareja P.
Vinicio Reyes E.
Wilson Vela H.

PANAMA

Juan L. de Obarrio
Dora de Lanzner
Carlos A. López-Guevara
Camilo Quintero

UNITED STATES OF AMERICA

Eugene D. Bennett
John G. Driscoll, Jr.
William H. Holmstrom
J. L. McHugh

Director of Investigations — Director de Investigaciones
JOHN LAURENCE KASK, Ph. D.

Headquarters and Main Laboratory — Oficina y Laboratorio Principal
c/o SCRIPPS INSTITUTION OF OCEANOGRAPHY
LA JOLLA, CALIFORNIA, U. S. A.

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OCEANOGRAPHIC OBSERVATIONS IN THE GULF OF GUAYAQUIL,
1962-1964. PART II. BIOLOGICAL, CHEMICAL AND PHYSICAL

INTRODUCTION

During 1961 the government of Ecuador, with the financial assistance of the Special Fund of the United Nations and the technical assistance of FAO experts, initiated an extensive program of fisheries research centered in a fisheries institute established in Guayaquil. In cooperation with this program, and in connection with Ecuador's adherence in 1961 to the Convention for the Establishment of an Inter-American Tropical Tuna Commission, a two-and-a-half year investigation of the ecology of the Gulf of Guayaquil and adjacent waters was started by the Inter-American Tropical Tuna Commission.

Specifically, the objectives of the research program were:

I. Physical oceanography

- A. To establish the general pattern of distribution of temperature, salinity, oxygen, phosphate, nitrite, and silicate, their seasonal fluctuations and the factors controlling fluctuations.
- B. To establish the pattern of circulation and replenishment in the Gulf of Guayaquil and its estuarial waters.

II. Biological oceanography

- A. To establish the magnitude, distribution and seasonal fluctuations in the primary production of the Gulf of Guayaquil and the factors controlling the fluctuations.

B. To establish the magnitude, distribution and seasonal fluctuations in the standing crops of net phytoplankton and zooplankton.

C. To establish the seasonal qualitative changes in the phytoplankton and zooplankton populations of the region.

The study region (Fig. 1) was divided into 1), an inner estuarial region containing 21 stations (A-V) extending eastward into the Guayas river estuary from a line fronting the westward face of Puna Island and 2), an outer estuarial region containing 18 stations (1-18) that extended westward from this line to the 100 fathom curve in the Gulf. Insofar as possible, the inner estuarial region was sampled bi-weekly and the outer, monthly. Table 1 contains a list of the stations and their respective coordinates.

This report lists the biological observations made during the study. Estimates of plankton concentration and pigments are located in Appendix I. The remainder of the chemical data, not listed in Part 1 (1966) has been included in Appendix II; a small quantity of physical oceanographic observations are included as Appendix III.

METHODS

Meteorological observations

At each station cloud cover was estimated. Wind velocity was measured with a hand-held anemometer; wind direction was estimated from the ship's heading. Permanently-mounted wet- and dry-bulb thermometers measured wet and dry air temperature. These observations were converted to relative humidity with a

nomograph. Barometric pressures were derived from readings of a temperature-corrected aneroid barometer.

BIOLOGICAL OBSERVATIONS

Primary productivity - Primary productivity was estimated by the amount of C^{14} , a radioactive isotope fixed by the phytoplankton and by the amount of oxygen evolved by the plankton.

The following method was used for the fixation of C^{14} : At each station water samples were collected from the surface layer and from three depths down to 47 m. The majority of the samples were collected at 25 m or less. The water samples from each depth were drawn into sets of three bottles, two clear glass bottles (LB) and one dark bottle (DB) made opaque by a covering of black paint or tape. Each bottle was inoculated with a small known quantity of C^{14} and each set of three bottles was then placed into a plastic tubular incubator to simulate the lighting conditions of the euphotic zone. The surface samples were allowed full sunlight, the second set of samples received 50% of the incoming light, the third set received 14.6% of the sunlight and the fourth set received 1% of the incoming light. Various mesh screens and opalescent sheathing were placed around the incubators to obtain the desired level of sunlight for the samples. The samples were maintained at a temperature within about one degree of the surrounding water by circulating sea water around the sample bottles. The water samples usually were left in the incubators for six hours and then removed.

After the samples were removed from the incubators, the water was filtered through HA Millipore filters to retain the plankton in the water. Each filter was subsequently placed in a continuous

flow Nuclear Chicago D-47 gas flow counter and counted three times.

Separate water samples were also collected to establish the natural level of C^{14} in the sea water. Each water sample was filtered without an incubation period and then counted three times.

The actual counting method used was to measure the length of time required to count 2560 or 10240 disintegrations, and to determine a mean counting time by

$$\bar{T} = \frac{\sum_{i=1}^N T_i}{N} \quad \text{where } T_i \text{ represents a specific counting time}$$

and N is the number of counting trials.

The raw counts per minute (RCM) were determined and standardized by assuming

$$RCM = \frac{\text{Total count}}{\bar{T}} \frac{1}{E} \quad \text{where the Total count is 2560 or 10240}$$

and E is the machine efficiency determined by a ratio of the time required to count a standard sample of C^{14} to the time predicted or expected for the count. The background level of C^{14} in sea water was either a mean value for a group of determinations, or was a number that varied with the sample to be counted. The operation during a particular cruise determined the method that was used. The true counts per minute (CM) then were

$$CM = RCM - \text{background} \quad .$$

The mean or high net count (NC) at this point was determined in two ways: the first way was to average both light bottle results, the second way was to use the higher value from the light bottles. In each case the NC was determined as

$$NC(M) = \frac{LB(1) + LB(2)}{2} - DB$$

and

$$NC(H) = \text{Higher LB} - DB$$

To convert the net counts per minute to fixed carbon (FC), the following equation was applied:

$FC = \frac{D(SC)(NC)}{AC}$ where D is the discrimination factor of 1.05, SC is the count for sea water, NC represents either the mean net count of high net count, and AC is the counts per minute of the C^{14} aliquot added to each water sample. The results from this equation are called the high productivity and the mean productivity.

Euphotic zone productivity (EZP) - The values of fixed carbon at the various depths are integrated using the following relationships:

$$EZP1 = \frac{\sum_{z=0}^Z (FC(z) - FC(z+1))(\Delta z)}{\log \left[\frac{FC(z)}{FC(z+1)} \right]} \quad \text{if there are no negative or zero FC values and}$$

$$EZP2 = \sum_{z=0}^Z \frac{FC(z) - FC(z+1)}{2(\Delta z)} \quad \text{if FC is zero or negative}$$

Here, FC(z) and FC(z+1) represent successive values of fixed carbon with depth and Δz is the depth difference corresponding to each pair of fixed carbon values. When one or more FC values are zero or negative the euphotic zone productivity becomes

$$EZP = EZP(1) + EZP(2)$$

Measurements of Primary Production using oxygen measurements

At most stations additional water samples were collected and measured for their oxygen content. In a manner similar to the

C¹⁴ method, surface water was collected and drawn into two light bottles (LB) and one dark bottle (DB). Additional water was drawn into a control bottle (CB) and immediately measured for oxygen content. Four oxygen determinations were made for each bottle. Mean oxygen concentrations were determined for both light bottles. Individual determinations (X) were checked by the following inequality,

$$\left| X - \frac{\sum X}{N} \right| \geq 2 \sqrt{\frac{\frac{\sum X^2}{N} - \left(\frac{\sum X}{N} \right)^2}{N}}$$

and if they fell outside the 99% confidence limit they were rejected. The mean concentrations were then recalculated without the questionable values.

Gross Primary Production - Gross primary production (GP) was estimated by the equation

$$GP = .536 \frac{(\bar{LB} - \bar{DB})}{1.2} (1000) \text{ where } 1000 \text{ is a volume}$$

conversion constant, 1.2 is the photosynthetic quotient and .536 is a conversion constant from ml oxygen to mgC/M³.

Daylight Net Productivity - Daylight net productivity (DNP) was determined by

$$DNP = .536 \frac{(\bar{LB} - \bar{CB})}{1.2} (1000)$$

The standard deviation within each set of determinations was calculated from

$$SDDNP = \sqrt{\frac{\frac{\sum LB^2}{N} - \left(\frac{\sum LB}{N} \right)^2}{N} + \frac{\frac{\sum CB^2}{M} - \left(\frac{\sum CB}{M} \right)^2}{M}}$$

where M and N are the number of trials (determinations) for the control bottle and the light bottle respectively.

Day Respiration (DR) - was computed from the following quotient.

$$R = 536 \left\{ \frac{(CB - DB)}{1.0} \right\} \text{ where 1.0 is the respiration quotient.}$$

The standard deviation for the day respiration was determined by

$$SDDR = \sqrt{\frac{\frac{M \sum CB^2}{1} - \left(\frac{\sum CB}{1} \right)^2}{M^2} + \frac{\frac{N \sum DB^2}{1} - \left(\frac{\sum DB}{1} \right)^2}{N^2}}$$

where N here is the number of determinations for the dark bottle.

Daily Net Productivity - Daily net productivity (DNP₂₄) was determined by

$$DNP_{24} = DNP - DR$$

The standard deviation within each set of determinations was calculated by

$$SDDNP_{24} = \sqrt{(SDDNP)^2 + (SDDR)^2}$$

The Gross Production in the Euphotic Zone - Gross production in the euphotic zone (EZGP) was estimated by

$$EZGP = .538(\text{Sec})(GP) \text{ where Sec is the Secchi Disc reading.}$$

If no Secchi Disc value was available the third depth from the surface was used.

Euphotic Zone Net Production - Net production in the euphotic zone (EZDNP₂₄) was calculated from

$$EZDNP_{24} = EZGP - 5(\text{Sec})(DR) \text{ where the 5 represents twice the 2.5 factor used with the Secchi Disc.}$$

Night Respiration - At special stations night respiration (NR) experiments were made. Water was drawn into two bottles. The water from one of the bottles was immediately checked for oxygen content by the Winkler method and served as the control bottle.

The night respiration was obtained by

$$NR = 536 (\overline{CB} - \overline{DB})$$

A comparison of day/night respiration was made when both values were available.

Organic material secreted - Prior to further calculations, all C^{14} measurements of production using the surface light bottles were checked by the following inequality

$$10 \geq \frac{100(LB - \overline{LB})}{\overline{LB}}$$

and the secretion conclusions were rejected if the values varied more than 10% from the mean value. All of the oxygen primary production measurements were also checked by the following inequality

$$10 \geq \frac{100(SDGP)}{GP}$$

and rejected if the standard deviation varied more than 10% from the gross productivity.

Surface amount of secreted matter - The amount of secreted surface matter was determined from reasonable values of C^{14} productivity and oxygen production by

$$SecMat = GP + DR - Mean Prod(by C^{14})$$

The C^{14}/O_2 per oxygen produced was calculated by

$$C^{14}/O_2 \text{ per } O_2 = \frac{100(SecMat)}{GP}$$

Plankton net tows - Plankton net tows were made using Clarke-Bumpus nets and/or one-half meter conical nets with a No. 28 mesh. The one-half meter net tows were for the sea surface; the Clarke-Bumpus net tows were made at various depths including the surface.

Dissolved pigments - Surface water samples were collected at various stations, filtered and analyzed for the chlorophylls a, b

and c, and for astacin and non-astacin carotenes. The analyses were made with a Beckman DU spectrophotometer. The general method was slightly modified from that of Strickland and Parsons (1960).

ANALYTICAL METHODS

Phosphate, nitrite and silicate - A Beckman model DU spectrophotometer with ten cm absorption cells was used for determining phosphate, nitrite, and silicate following the modifications of standard methods described by Strickland and Parsons (1960). The precision of various methods for single samples is estimated by Strickland as follows. Phosphate: at 3ug-at/liter level, $\pm 0.11\text{ug-at/liter}$; 0.3ug-at/liter level, $\pm 0.055\text{ug-at/liter}$. Silicate: at 100ug-at/liter level, $\pm 2.5\text{ug-at/liter}$; at 10ug-at/liter level, $\pm 0.25\text{ug-at/liter}$. Nitrite: at 1ug-at/liter level, $\pm 0.032\text{ug-at/liter}$; at 0.3ug-at/liter level, $\pm 0.023\text{ug-at/liter}$.

pH determinations - Surface and subsurface samples of water were collected with Morrison-Knudson or Atlas reversing bottles. Determinations of pH were made with a Beckman pH Meter Model G. The readings have a reasonable precision of ± 0.02 pH per determination. Because all of the water samples came from less than 500 m depth, pressure effects were ignored. The in situ pH as noted by Strickland and Parsons (1960) may be determined from

$$\text{pH}_s = \text{pH}_m - \alpha(t - t_m)$$
 where pH_m and t_m are the observed pH and water temperature, and α is the specific volume of the water sample.

Uncertainties in the biological data - According to Strickland and Parson (1960), the precision of the oxygen method when applied to primary production is known to $\pm 8\%$ when four determinations are made from each water sample.

The precision of the C^{14} method of estimating primary production is known to $\pm 1.8 \text{ mgC/M}^3/\text{hr}$ at a level of $25 \text{ mgC/M}^3/\text{hr}$, and to $\pm 0.08 \text{ mgC/M}^3/\text{hr}$ at a level of $1.5 \text{ mgC/M}^3/\text{hr}$ when one and five microcuries of C^{14} activity have been added to the water samples. Four determinations or counts of the same sample are required.

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At La Jolla, Messrs Christopher T. Psaropulos and Edward B. Bennett were responsible for the computer programming and processing of data for this report, with the assistance of Mr. Robert Wagner.

Dr. Malvern Gilmartin was scientist-in-charge of the Commission's program in Ecuador and supervised the early stages of data processing at La Jolla. Final data processing and compilation was directed by Dr. Merritt Stevenson.

EXPLANATION OF TABLES

Station data were punched on IBM cards and then processed with the Control Data Corporation 3600 Computer at the University of California at San Diego, with a program developed by IATTC personnel. This program processed and printed onto Multilith masters the station number and position, date, cast time(s), weather observations, surface temperature, Secchi disc reading,

and tide position. It calculated at observed depths high and mean productivity, net productivity for 12 and 24 hour periods and gross productivity. Net productivity for 24 hour periods and the gross production in the euphotic zone were calculated by integrating the values through the water column sampled. Day and night respiration at the sea surface and the ratio of these measurements were also computed. The ratio of C^{14}/O_2 per oxygen produced was determined and the amount of secreted matter in the surface water. Standard deviations were also calculated for net productivity (12-and 24-hour), gross productivity, and surface day and night respiration. The results were then stored on magnetic tape and printed by an IBM 1403 printer.

The symbols -0 or -2 after the station designation in the table heading indicates either 1 or 2 bottle-casts (respectively) at the particular station. Blank spaces in the tables indicate either no data or inability to compute values because of questionable data. The questionable data are denoted by the numeral 1 following the datum in question. Such data were not used for interpolation.

Most of the table headings are self-explanatory. Listed below are clarifications, as required, of the table headings.

LAT.) LONG.)	In degrees and minutes (and tenths of minutes for some stations)
DATE	Greenwich date
TIME	Greenwich time
WEATHER	Coded according to H.O. Publication 606-C (1954)
CLOUD COVER	Coded according to H.O. Publication 606-C (1954)

WIND VEL.	Wind velocity, in knots and meters per second
WIND DIR.	Wind direction, showing range of direction, in degrees true, from which wind was blowing
SECCHI DISC DEPTH	Depth in meters to which a Secchi disc could be seen
TIDE FLOODING) TIDE EBBING)	Tide at time of observation, in tenths of maximum height
O/O INCUB LIGHT	Light intensity in percent compared to ambient intensity at the sea surface. The four percentages were assigned in decreasing order to increasing depths.
HIGH PROD	Productivity estimate using C^{14} based on the higher value of two incubated light bottles. Units are $mgC/M^3/day$ (12 hours).
MEAN PROD	Mean productivity estimate using C^{14} based on the average value of two light bottles. The units are $mgC/M^3/day$ (12 hours)
E.Z.PROD	Euphotic zone productivity is estimated by numerically integrating the above productivity values for each type of estimate. The units are $mgC/M^2/day$ (12 hours)
NET PROD (12)	Net productivity for the daylight hours using mean oxygen values from light bottles. The units are $mgC/M^3/day$ (12 hours)
NET PROD (24)	Net productivity for 24 hours using the difference in oxygen values for NET PROD (12) and DAY RESP. The units are $mgC/M^3/day$ (24 hours)
GROSS PROD	Gross productivity for the daylight hours using the difference in oxygen values from light and dark bottles. The units are $mgC/M^3/day$ (12 hours)
E.Z.NET(24) PROD	Euphotic zone net production for 24 hours using EZGP and DR values. The units are $mgC/M^2/day$ (24 hours)
E.Z. GROSS PROD	Euphotic zone gross production is obtained by integrating values of GROSS PROD. The units are $mgC/M^2/day$ (12 hours)

SFC DAY RESP	Surface day respiration was determined from oxygen estimates from control and dark bottles. The units are mgC/M ³ /day (12 hours)
SFC NIGHT RESP	Surface night respiration was determined from oxygen estimates for control and dark bottles samples after sunset. The units are mgC/M ³ /day (12 hours)
DAY/NIGHT RESP	Day to night respiration was determined when both values were available. The ratio has no units
C ¹⁴ /O ₂ PER O ₂ PROD	The ratio of C ¹⁴ /O ₂ per O ₂ produced was determined from the SFC AMOUNT of secreted matter and the GROSS PROD
SFC AMOUNT SECRETED	The surface amount secreted is determined from the GROSS PROD, DAY RESP, AND MEAN PROD. The units are mgC/M ³ /day (12 hours)
SIG	Signals whether or not there was a determination of the amount of carbon in sea water. The value is 1 (no) or 0 (yes)

OBSERVACIONES OCEANOGRAFICAS EN EL GOLFO DE GUAYAQUIL
1962-1964. PARTE II. BIOLOGICA, QUIMICA Y FISICA

INTRODUCCION

Durante 1961 el gobierno ecuatoriano con el apoyo financiero del Fondo Especial de las Naciones Unidas y la ayuda técnica de los expertos de la FAO, inició un programa extensivo de investigación pesquera, centralizado en el instituto pesquero establecido en Guayaquil. En cooperación con este programa y en conexión a la afiliación del Ecuador a la Convención, en 1961, para el establecimiento de una Comisión Interamericana del Atún Tropical, fue iniciada por la Comisión una investigación de dos años y medio sobre la ecología del Golfo de Guayaquil y de las aguas adyacentes.

Los objetivos del programa investigativo fueron específicamente:

I. Oceanografía física

- A. Establecer un modelo general de distribución de la temperatura, salinidad, oxígeno, fosfato, nitrito y silicato, de sus fluctuaciones estacionales y de los factores que controlan las fluctuaciones.
- B. Establecer un modelo de la circulación y del reabastecimiento en el Golfo de Guayaquil y de las aguas de los esteros.

II. Oceanografía biológica

- A. Establecer la magnitud, la distribución y las fluctuaciones estacionales de la producción primaria del Golfo de Guayaquil y de los factores que controlan las fluctuaciones.

- B. Establecer la magnitud, la distribución y las fluctuaciones estacionales en las existencias del fitoplancton y del zooplancton neto.
- C. Establecer los cambios cualitativos estacionales en las poblaciones del fitoplancton y del zooplancton de la región.

La región estudiada (Figura 1) fue dividida 1), en un territorio estuarino interior con 21 estaciones (A-V) extendiéndose desde una línea frente a la faz occidental de la Isla Puna dentro del estuario del Río Guayas, hacia el este y 2) un territorio estuarino exterior con 18 estaciones (1-18) que se extiende hacia el oeste desde esta línea hasta la curva de las 100 brazas en el Golfo. Hasta donde fue posible se muestreó dos veces por semana el territorio estuarino interior, y el exterior se muestreó mensualmente. La Tabla I contiene una lista de las estaciones y de sus coordenadas respectivas.

Este informe enumera las observaciones biológicas conducidas durante el estudio. Los estimativos de las concentraciones de plancton y de los pigmentos se encuentran en el Apéndice I. Los datos químicos restantes que no están enumerados en la Parte I (1966) han sido incluídos en el Apéndice II; una pequeña cantidad de observaciones físicas oceanográficas se incluyen como Apéndice III.

MÉTODOS

Observaciones meteorológicas

En cada estación se estimó la cubierta de nubes. La velocidad del viento fue medida con un anemómetro manual; la dirección

del viento fue estimada según el frente del barco. Termómetros permanentemente armados con ampolletas húmedas y secas midieron la humedad y sequedad de la temperatura del aire. Estas observaciones fueron convertidas a humedad relativa con un nomógrafo. Se obtuvieron las presiones barométricas según la lectura de un barómetro aneroide de temperatura corregida.

OBSERVACIONES BIOLOGICAS

Productividad primaria - La productividad primaria fue estimada por la cantidad de C^{14} , un isótopo radioactivo fijado por el fitoplancton, y por la cantidad de oxígeno producido por el plancton.

Se empleó el método siguiente para la fijación del C^{14} : se colectaron muestras de agua de la capa superficial y a tres profundidades descendentes hasta los 47 m, en cada estación. La mayoría de las muestras fueron colectadas a 25 m o menos. Las muestras de agua de cada profundidad se colocaron en series de tres botellas, dos botellas de vidrio transparente (BT) y una botella obscura (BO) opacada con cinta adhesiva negra o pintura negra. Cada botella fue inoculada con una pequeña cantidad conocida de C^{14} y cada serie de tres botellas fue colocada en una incubadora plástica tubular para simular las condiciones luminosas de la zona eufótica. Las muestras superficiales fueron expuestas completamente a la luz solar, la segunda serie de muestras recibió el 50% de la luz dimanada, la tercera serie recibió un 14.6% de luz solar y la cuarta serie recibió el 1% de la luz dimanada. Se colocaron alrededor de las incubadoras varias mamparas de malla y cubiertas opalinas para obtener el nivel deseado de luz solar para las muestras. Las muestras se mantuvieron

a una temperatura aproximadamente de un grado del agua circundante, al circular el agua de mar alrededor de las botellas de las muestras. Las muestras de agua se dejaban por lo general en las incubadoras seis horas y luego se sacaban.

Después de sacar las muestras de las incubadoras, se filtraba el agua a través de filtros HA Millipore para retener el plancton que se encontraba en el agua. Luego se colocó cada filtro en un contador de flujo de gas de corriente continua (Nuclear Chicago D-47) y se contó tres veces.

Se colectaron también muestras separadas de agua para establecer el nivel natural del C^{14} en el agua de mar. Se filtró cada muestra de agua sin haber tenido un período de incubación y luego se contó tres veces.

El método actual de cálculo empleado, fue para medir la cantidad de tiempo requerido para contar 2560 o 10240 desintegraciones y para determinar un tiempo medio de cálculo por

$$\bar{T} = \frac{\sum_{i=1}^N T_i}{N} \quad \text{donde } T_i \text{ representa un tiempo específico}$$

de cálculo y N es el número de las pruebas de cálculo.

La cuenta bruta por minuto (CBM) fue determinada y standardizada al suponer

$$CBM = \frac{\text{Cuenta total}}{\bar{T}} \frac{1}{E} \quad \text{donde la cuenta total es 2560 o 10240 y } E \text{ es la eficiencia del contador determinada por la razón del tiempo requerido para contar una muestra standard del } C^{14} \text{ relativa al tiempo pronosticado o esperado para el cálculo. El nivel ambiental del } C^{14} \text{ en el agua de mar fue un valor medio para}$$

un grupo de determinaciones, o fue un número que varió con la muestra que había de contarse. La operación durante un crucero particular determinó el método que fue empleado. Las cuentas verdaderas por minuto (CM) fueron entonces

$$CM = CBM - \text{nivel ambiental}$$

La media o la cuenta alta, neta (CN), fue a este punto determinada de dos maneras: la primera fue promediar los resultados de ambas botellas transparentes, la segunda emplear el valor alto de las botellas transparentes. En cada caso se determinó la CN como

$$CN(M) = \frac{BT(1) + BT(2)}{2} - B0$$

y

$$CN(A) = \text{valor más alto de la BT} - B0$$

Para convertir las cuentas netas por minuto a fijación de carbono (FC), se aplicó la siguiente ecuación:

$$FC = \frac{D(CM)(CN)}{AC} \quad \text{donde } D \text{ es el factor de discriminación}$$

de 1.05, CM es la cuenta del agua de mar, CN representa ya sea la cuenta media neta o la cuenta alta neta y AC es la cuenta por minuto de la alícuota del C^{14} agregada a cada muestra de agua de mar. Los resultados de esta ecuación son llamados alta productividad y productividad media.

Productividad de la zona eufótica (PZE) - Los valores de la fijación de carbono a varias profundidades son integrados por medio del empleo de las siguientes relaciones:

$$PZE1 = \frac{\sum_{z=0}^Z (FC(z) - FC(z+1))(\Delta z)}{\log \left[\frac{FC(z)}{FC(z+1)} \right]} \quad \text{si no hay valores de la FC negativos o de cero y}$$

$$PZE2 = \sum_{z=0}^Z \frac{FC(z) - FC(z+1)}{2(\Delta z)} \quad \text{si la FC es cero o negativa}$$

Aquí, $FC(z)$ y $FC(z+1)$ representan los valores sucesivos de la fijación de carbono en relación a la profundidad y Δz es la diferencia de profundidad correspondiente a cada par de valores de la fijación de carbono. Cuando uno o más valores de la FC es cero o negativo la productividad de la zona eufótica se convierte

$$PZE = PZE(1) + PZE(2) \quad .$$

Mediciones de la Producción Primaria usando las mediciones de oxígeno

En la mayoría de las estaciones se colectaron y avaluaron muestras adicionales de agua para el contenido de oxígeno. De una manera similar al método del C^{14} , se recolectó agua superficial y se puso en dos botellas transparentes (BT) y en una botella obscura (BO). Se puso agua adicional dentro de una botella de control (BC) y se midió inmediatamente el contenido de oxígeno. Se hicieron cuatro determinaciones de oxígeno para cada botella. Se determinaron las concentraciones medias de oxígeno para ambas botellas transparentes. Se revisaron determinaciones individuales (X) por medio de la siguiente desigualdad,

$$\left| X - \frac{\sum X}{N} \right| \geq 2 \sqrt{\frac{\frac{1}{N} \sum X^2 - \left(\frac{\sum X}{N} \right)^2}{N}}$$

y si caen fuera del límite de confianza del 99% fueron rechazadas. Las concentraciones medias fueron entonces calculadas de nuevo sin los valores dudosos.

Producción primaria bruta - La producción primaria bruta (PB) fue estimada por la ecuación

$PB = .536 \frac{(\overline{BT} - \overline{BO})}{1.2} (1000)$ donde 1000 es una constante de la conversión del volumen, 1.2 es el cociente fotosintético y .536 es una constante de conversión de ml de oxígeno a mgC/M³.

Productividad Neta Diurna - La productividad neta diurna (PND) fue determinada por

$$PND = .536 \frac{(\overline{BT} - \overline{BC})}{1.2} (1000) .$$

La desviación standard dentro de cada serie de determinaciones fue calculada según

$$DSPND = \sqrt{\frac{\frac{N}{1} \sum BT^2 - \left(\frac{N}{1} \sum BT \right)^2}{N^2} + \frac{\frac{M}{1} \sum BC^2 - \left(\frac{M}{1} \sum BC \right)^2}{M^2}}$$

donde M y N son el número de pruebas (determinaciones) de la botella de control y de la botella transparente respectivamente.

Respiración Diurna (RD) - fue computada según la siguiente ecuación

$RD = 536 \left\{ \frac{(\overline{BC} - \overline{BO})}{1.0} \right\}$ donde 1.0 es el cociente de respiración. La desviación standard para la respiración diurna fue determinada por

$$DSRD = \sqrt{\frac{\frac{M}{1} \sum BC^2 - \left(\frac{M}{1} \sum BC \right)^2}{M^2} + \frac{\frac{N}{1} \sum BO^2 - \left(\frac{N}{1} \sum BO \right)^2}{N^2}}$$

donde N aquí es el número de determinaciones para la botella oscura.

Productividad Neta Diaria - La productividad neta diaria (PND24) fue determinada por

$$PND24 = PND - RD .$$

La desviación standard entre cada serie de determinaciones fue calculada por

$$DSPND24 = \sqrt{(DSPND)^2 + (DSRD)^2}$$

La Producción Bruta en la Zona Eufótica - La producción bruta en la zona eufótica (PBZE) fue estimada por

PBZE = .538(Sec)(PB) donde Sec es la lectura del Disco Secchi. Si no se dispuso del valor del Disco Secchi se empleó la tercera profundidad desde la superficie.

Producción Neta de la Zona Eufótica - La producción neta en la zona eufótica (PNDZE24) fue calculada según

PNDZE24 = PBZE - 5(Sec)(RD) donde el 5 representa dos veces el factor 2.5 usado con el Disco Secchi.

Respiración Nocturna - En estaciones especiales se efectuaron experimentos de respiración nocturna (RN). Se puso agua dentro de dos botellas. Se examinó inmediatamente el agua de una de las botellas para el contenido de oxígeno por el método de Winkler y sirvió como botella de control. La respiración nocturna se obtuvo por

$$RN = 536(\overline{BC} - \overline{BO})$$

Se hizo una comparación de la respiración diurna y nocturna cuando se dispuso de ambos valores.

Material orgánico segregado - Antes de hacer más cálculos, se revisaron todas las medidas de producción del C^{14} empleando las botellas transparentes de la superficie por medio de la siguiente desigualdad

$$10 \geq \frac{100(BT - \overline{BT})}{\overline{BT}}$$

y se rechazaron las conclusiones de segregación si los valores

variaban más del 10% del valor medio. Se examinaron también todas las mediciones de la producción primaria de oxígeno según la siguiente desigualdad

$$10 \geq \frac{100(DSPB)}{PB}$$

y se rechazó si la desviación standard tuvo una variación de más del 10% de la productividad bruta.

Cantidades superficiales de material segregado - La cantidad de materia superficial segregada fue determinada según los valores razonables de la productividad del C^{14} y de la producción de oxígeno por

$$MatSeg = PB + RD - Prod. Media(por C^{14})$$

El C^{14}/O_2 por oxígeno producido fue calculado por

$$C^{14}/O_2 \text{ por } O_2 = \frac{100(MatSeg)}{PB} .$$

Arrastres con redes de plancton - Los arrastres con redes de plancton se realizaron con redes Clarke-Bumpus y/o redes cónicas de medio metro con malla No. 28. Se efectuaron los arrastres superficiales con las redes de medio metro; los arrastres de las redes Clarke-Bumpus se realizaron a varias profundidades incluyendo la superficie.

Pigmentos disueltos - Se colectaron muestras de agua superficial en varias estaciones, se filtraron y analizaron para medir la clorofila a, b y c, y para medir caronetos con astacin o sin astacin. Los análisis se efectuaron con un espectrofotómetro Beckman DU. El método general fue ligeramente modificado del de Strickland y Parsons (1960).

METODOS ANALITICOS

Fosfato, nitrito y silicato - Se empleó un espectrofotómetro modelo Beckman DU con ampollitas de absorción de diez cm para

determinar el fosfato, nitrito y el silicato siguiendo las modificaciones de los métodos standard descritos por Strickland y Parsons (1960). La precisión de varios métodos para muestras individuales es estimada por Strickland como sigue. Fosfato: al nivel de 3ug-at/litro, ± 0.11 ug-at/litro; al nivel de 0.3ug-at/litro, ± 0.055 ug-at/litro. Silicato: al nivel de 100ug-at/litro, ± 2.5 ug-at/litro; al nivel de 10ug-at/litro, ± 0.25 ug-at/litro. Nitrito: al nivel de 1ug-at/litro, ± 0.032 ug-at/litro; al nivel de 0.3ug-at/litro, ± 0.023 ug-at/litro.

Determinaciones de pH - Las muestras de agua superficiales y subsuperficiales fueron colectadas con botellas reversibles Morrison-Knudson o Atlas. Las determinaciones de pH fueron efectuadas con un metro pH Beckman Modelo G. Las lecturas tienen una precisión razonable de ± 0.02 pH por determinación. Debido a que todas las muestras de agua fueron extraídas a menos de 500 m de profundidad, se ignoraron los efectos de presión. El pH in situ conforme fue observado por Strickland y Parsons (1960) puede determinarse según

$$pH_s = pH_m - \alpha(t - t_m)$$
 donde pH_m y t_m son el pH observado y la temperatura del agua y α es el volumen específico de la muestra de agua.

Inestabilidad de los datos biológicos - De acuerdo a Strickland y Parson (1960), la precisión del método de oxígeno cuando se aplica a la producción primaria se conoce a $\pm 8\%$ cuando se efectúan cuatro determinaciones de cada muestra de agua.

La precisión del método del C^{14} en estimar la producción primaria es conocida a ± 1.8 mgC/M³/hr a un nivel de 25 mgC/M³/hr, y a ± 0.08 mgC/M³/hr a un nivel de 1.5 mgC/M³/hr cuando uno y cinco microcurios de la actividad del C^{14} han sido agregados

a las muestras de agua. Se necesitan cuatro determinaciones o cálculos de la misma muestra.

Reconocimiento a los participantes

El éxito de un programa como éste depende en su mayoría en el personal participante. Se agradece y reconoce la ayuda de las siguientes personas en el Ecuador:

Dr. Luis Arriaga	Sr. Julio Macías
Dr. José Santoro	Srta. Sarvelia Maldonado
Sr. Angel Ansaldo	Srta. Lucía Solórzano
Sr. Jorge Domenech	Sr. Carlos Guevara

En la Jolla, los Sres. Christopher T. Psaropulos y Edward B. Bennett junto con la ayuda del Sr. Robert Wagner fueron responsables del programa computador y del procesamiento de los datos correspondientes a este informe.

El Dr. Malvern Gilmartin fue el científico a cargo del programa de la Comisión en el Ecuador y supervisó las primeras etapas del procesamiento de los datos en la Jolla. El procesamiento final de los datos y la compilación fue dirigida por el Dr. Merritt Stevenson.

EXPLICACION DE LAS TABLAS

Los datos de las estaciones fueron perforados en tarjetas IBM y luego procesados con el computador 3600 del Control Data Corporation de la Universidad de California en San Diego, con un programa desarrollado por el personal de la CIAT. Este programa procesó e imprimió sobre originales Multilith el número de la estación y posición, las fechas, tiempo(s) de lanzamiento, observaciones meteorológicas, temperatura superficial, lecturas del Disco Secchi y posición de la marea. Calculó a profundidades observadas la productividad alta y media, la productividad

neta en períodos de 12 y 24 horas, y la productividad bruta. La productividad neta para períodos de 24 horas y la producción bruta en la zona eufótica fueron calculadas por integración de los valores a través de la columna de agua muestreada. La respiración diurna y nocturna de la superficie del mar y la razón de estas mediciones fueron también computadas. Se determinó la razón del C^{14}/O_2 por oxígeno producido y la cantidad de material segregado en la superficie del agua. Las desviaciones standard fueron también calculadas para la productividad neta (12 y 24 horas), la productividad bruta y la respiración diurna y nocturna. Los resultados fueron entonces registrados en cinta magnética e impresos por un impresor IBM 1403.

Los símbolos -0 o -2 después de la designación de la estación en el encabezamiento de la tabla indican ya sea 1 o 2 lanzamientos de botellas respectivamente en esa estación particular. Los espacios en blanco en la tabla, indican ya sea que no hay datos o incapacidad para computar valores debido a datos dudosos. Los datos dudosos se marcan con el número 1 enseguida de los datos en cuestión. Dichos datos no fueron empleados para interpolación.

La mayoría de los títulos en la tabla se explican a sí mismos. Enseguida se ofrecen explicaciones, según lo requieren los títulos de la tabla.

LAT.) (latitud)
LONG.) (longitud)

En grados y minutos (y décimos de minutos en algunas estaciones)

DATE (fecha)

Fecha Greenwich

TIME (hora)

Hora Greenwich

WEATHER (tiempo)

Codificado de acuerdo a la publicación H.O. 606-C (1954)

CLOUD COVER (tipo de nubes y porción del domo celeste cubierta por ellas)	Codificada de acuerdo a la publicación H.O. 606-C (1954)
WIND VEL. (velocidad del viento)	Velocidad del viento, en nudos y metros por segundo
WIND DIR. (dirección del viento)	Dirección del viento, indicando amplitud de dirección en grados verdaderos
SECCHI DISC DEPTH (transparencia del agua)	Profundidad en metros a la cual podía verse el disco Secchi
TIDE FLOODING) TIDE EBBING) (flujo y reflujo)	Estado de la marea en décimos de la altura máxima en el momento de ser observada
O/O INCUB LIGHT (% de luz incubada)	Porcentaje de la intensidad de la luz comparada a la intensidad ambiental de la superficie del mar. A medida que se aumenta la profundidad se disminuye el porcentaje
HIGH PROD (alta productividad)	Estimativo de la productividad, usando el C^{14} basado en el alto valor de dos botellas transparentes incubadas. Las unidades son $mgC/M^3/día$ (12 horas)
MEAN PROD (productividad media)	Estimativo de la productividad media usando el C^{14} , basado en el valor promedio de dos botellas transparentes. Las unidades son $mgC/M^3/día$ (12 horas)
E.Z. PROD (productividad de la zona eufótica)	La productividad de la zona eufótica es estimada por medio de la integración numérica de los valores de la productividad para cada tipo de estimativo. Las unidades son $mgC/M^2/día$ (12 horas)
NET PROD (12) (productividad neta)	Productividad neta de las horas diurnas, empleando valores medios de oxígeno de botellas transparentes. Las unidades son $mgC/M^3/día$ (12 horas)
NET PROD (24) (productividad neta)	Productividad neta en 24 horas, empleando la diferencia de los valores de oxígeno de la NET PROD (12) y del DAY RESP. Las unidades son $mgC/M^3/día$ (24 horas)
GROSS PROD (productividad bruta)	Productividad bruta en las horas diurnas, empleando la diferencia de los valores de oxígeno de las botellas transparentes y oscuras. Las unidades son $mgC/M^3/día$ (12 horas)

E.Z.NET (24) PROD
(producción neta de
la zona eufótica)

Producción neta de la zona eufótica
en 24 horas usando valores de la PBZE
y de la RD. Las unidades son mgC/M²/
día (24 horas)

E.Z. GROSS PROD
(producción bruta de
la zona eufótica)

La producción bruta de la zona eufótica
se obtiene por integración de los valo-
res de la GROSS PROD. Las unidades son
mgC/M²/día (12 horas)

SFC DAY RESP
(respiración superficial
diurna)

La respiración superficial diurna fue
determinada según los estimativos de
oxígeno de las botellas de control y
oscuras. Las unidades son mgC/M³/día
(12 horas)

SFC NIGHT RESP
(respiración superficial
nocturna)

La respiración superficial nocturna fue
determinada después del ocaso según los
estimativos de oxígeno de las muestras
en las botellas oscuras y de control.
Las unidades son mgC/M³/día (12 horas)

DAY/NIGHT RESP
(respiración del día a
la noche)

La respiración del día a la noche fue
determinada cuando se dispuso de ambos
valores. La razón no tiene unidades

C¹⁴/O₂ PER O₂ PROD

La razón producida del C¹⁴/O₂ por O₂,
fue determinada según SFC AMOUNT de ²,
material segregado y de la GROSS PROD.

SFC AMOUNT SECRETED
(cantidad superficial
segregada)

La cantidad superficial segregada es
determinada según la GROSS PROD, DAY
RESP, Y MEAN PROD. Las unidades son
mgC/M³/día (12 horas)

SIG
(indicación)

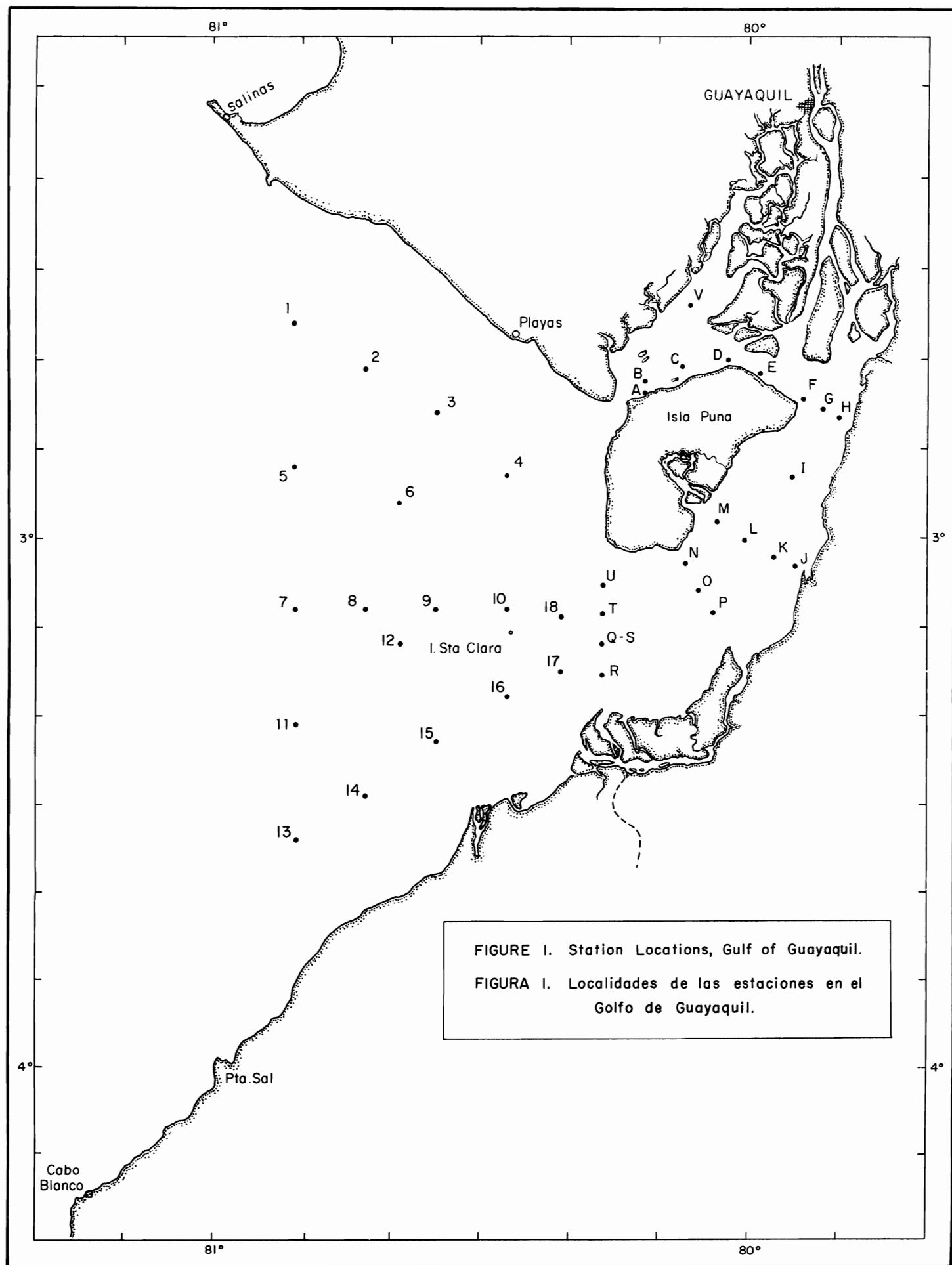
Indica si existe o no una determinación
de la cantidad de carbono en el agua
de mar. El valor es 1 (no) o 0 (si).

LITERATURE CITED - BIBLIOGRAFIA CITADA

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1

2

3

GULF OF GUAYAQUIL CRUISE 6208 STATION V- 0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 22 MAR 1952
 TIME 0713- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 115-125 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 758 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SLO
						PROD	MG/M3	PROD	MG/M3	PROD	MG/M3	PROD	MG/M2	PROD	MG/M2	
0138	0	100.0	210	178					-0		279					0
0138	.5	50.0	197	157												0
0138	1.2	14.6	21	20												0
0138	2.5	1.0	2	1												0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

166
 140

-549

150

STANDARD DEVIATIONS
 .06 .07 .07

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

140 0 0
 STANDARD DEVIATIONS
 .03 0

GULF OF GUAYAQUIL CRUISE 6208 STATION G- 0 LAT. 02 45.5 S LONG. 79 51.8 W DATE 23 MAR 1962
 TIME 0636-0642 WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 26.7 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 758 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	GROSS PROD MG/M2	SLO
0150	0	100.0	91	75		33	-91	157			0
0150	.5	50.0	6	4							0
0150	1.2	14.6	15	13							0
0150	2.5	1.0	1	0							0

INTEGRATED HIGH PRODUCTIVITY 36
 INTEGRATED MEAN PRODUCTIVITY 30

STANDARD DEVIATIONS
 .04 .07 .07
 -268 42

SFC DAY	SFC NIGHT	DAY/NIGHT	SECRETED C14/02 PER 02 PROD	MATTER SFC AMOUNT MG/M3	124 STANDARD DEVIATIONS .06
			0	0	0

GULF OF GUAYAQUIL CRUISE 6208 STATION P- 0 LAT. 03 08.6 S LONG. 80 04.0 W DATE 23 MAR 1962
 TIME 1257- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 185-195 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 30.0 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 758 MM TIDE EBBING 0/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	E.Z. GROSS PROD MG/M2	SIG
0162	0	100.0	121	114		161	-5	328			0
0162	.5	50.0	63	58							0
0162	1.2	14.6	3	3							0
0162	2.5	1.0	1	0							0

INTEGRATED HIGH PRODUCTIVITY 60
 INTEGRATED MEAN PRODUCTIVITY 55

STANDARD DEVIATIONS
 .15 .16
 -655 176

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

166 0
 STANDARD DEVIATIONS 0
 .05

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. MG/M3

GULF OF GUAYAQUIL CRUISE 6209 STATION V- 0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 3 APR 1962
 TIME 0638- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 65- 75 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 27.2 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 759 MM TIDE FLOODING, -3/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.	
									NET(24) PROD MG/M2	GROSS PROD MG/M2
0174	0	100.0	154	144		268	-0	536		0
0174	.5	50.0	42	28						0
0174	1.2	14.6	20	15						0
0174	2.5	1.0	1	1						0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

71
 56

STANDARD DEVIATIONS
 .19 .21
 -1054 289

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

268 0 123.21 661

STANDARD DEVIATIONS
 .08 0

GULF OF GUAYAQUIL CRUISE 6209 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 4 APR 1962
 TIME 0625- WEATHER 00 CLOUD COVER 9/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 175-185 T
 SECCHI DISK DEPTH 1.2 M SEA TEMP. 26.0 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 758 MM TIDE FLOODING, -1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		E.Z. GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
0186	0	100.0	229	200		779	650	908								0
0186	.5	50.0	100	98												0
0186	1.2	14.6	31	30												0
0186	2.5	1.0	2	2												0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

134
 125

-186

586

STANDARD DEVIATIONS
 .56 .57 .57

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

129 0 0
 STANDARD DEVIATIONS
 .09 0

GULF OF GUAYAQUIL CRUISE 6209 STATION P-0 LAT. 03 08.6 S LONG. 80 04.0 W DATE 4 APR 1962
 TIME 1335- WEATHER 03 CLOUD COVER 7-8/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 25.1 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 758 MM TIDE EBBING 5/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	GROSS PROD MG/M2	SIG
0198	0	100.0	209	199		361	208	514			0
0198	.5	50.0	10	10							0
0198	1.2	14.6	5	3							0
0198	2.5	1.0	1	0							0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

40
37

-487

276

STANDARD DEVIATIONS
 .29 .29 .29

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

90.99

0

0

153

0

STANDARD DEVIATIONS
 .04

467

GULF OF GUAYAQUIL CRUISE 6210 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 10 APR 1962
 TIME 0618- WEATHER 01 CLOUD COVER 6/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 75- 85 T
 SECCHI DISK DEPTH 1.2 M SEA TEMP. 25.7 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 758 MM TIDE EBBING 7/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS PROD MG/M3	E.Z. NET(24)		GROSS PROD MG/M2	SIG
						PROD MG/M3	PROD MG/M3	PROD MG/M2	PROD MG/M2					
0210	0	100.0	173	165		70	-512			653				0
0210	.5	50.0	3	3										0
0210	1.2	14.6	0	0										0
0210	2.5	1.0	3	3										0

INTEGRATED HIGH PRODUCTIVITY 23
 INTEGRATED MEAN PRODUCTIVITY 22

STANDARD DEVIATIONS
 .25 .25 .25
 -3073 421

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER SFC AMOUNT MG/M3
			C14/02 PER 02 PROD	163.91	
582	0	0		1070	
STANDARD DEVIATIONS					
.05					

GULF OF GUAYAQUIL CRUISE 6302 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 17 JAN 1963
 TIME 0648- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 205-215 T
 SECCHI DISK DEPTH 14.0 M SEA TEMP. 25.6 C AIR TEMP.(WET) 24.0 C AIR TEMP.(DRY) 25.8 C
 RELATIVE HUMIDITY 88 0/0 BAROMETER 759 MM TIDE EBBING 6/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2			
1078	0	100.0	7	4		25	-151				201					1
1078	2.5	50.0	1	1												1
1078	9.0	14.6	0	0												1
1078	30.0	1.0	0	0												1

INTEGRATED HIGH PRODUCTIVITY 9
 INTEGRATED MEAN PRODUCTIVITY 7

STANDARD DEVIATIONS
 .03 .03 .03
 -10833 1517

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER SFC AMOUNT MG/M3
			C14/02 PER 02 PROD	0	
176	0	0	0	0	0

STANDARD DEVIATIONS
 .02

GULF OF GUAYAQUIL CRUISE 6228 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 1 NOV 1962
 TIME 0558- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 22.9 C AIR TEMP.(WET) 20.3 C AIR TEMP.(DRY) 22.2 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 761 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	E.Z. GROSS PROD MG/M2	SIG
0751	.6	50.0	26	25				1			
0751	1.3	14.6	10	10				1			
0751	3.7	1.0	-1	-1				1			

INTEGRATED HIGH PRODUCTIVITY 33
 INTEGRATED MEAN PRODUCTIVITY 31

STANDARD DEVIATIONS
 .17 .21 .21
 -1049 188

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
165	0	0	155.30	361
STANDARD DEVIATIONS				
.12	0			

GULF OF GUAYAQUIL CRUISE 6211 STATION A- 0 LAT. 02 44.2 S LONG. 80 11.5 W DATE 25 APR 1962
 TIME 0554- WEATHER 01 CLOUD COVER WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 305-315 T
 SECCHI DISK DEPTH -0 M SEA TEMP. 25.9 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM TIDE EBBING 4/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
0258	0	100.0	260	207		0	-97	0			0
0258	.5	50.0	25	23							0
0258	1.2	14.6	12	11							0
0258	2.5	1.0	3	2							0

INTEGRATED HIGH PRODUCTIVITY 71
 INTEGRATED MEAN PRODUCTIVITY 61

STANDARD DEVIATIONS
 .17 .21 .21

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

0 0 0

0

STANDARD DEVIATIONS
 .12 0

GULF OF GUAYAQUIL CRUISE 6210 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 11 APR 1962
 TIME 0653- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 335-345 T
 SECCHI DISK DEPTH 10.0 M SEA TEMP. 25.3 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 757 MM TIDE EBBING 6/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
0222	0	100.0	15	15			-238	-554			78					0
0222	5.0	50.0	3	2												0
0222	12.0	14.6	7	7												0
0222	28.0	1.0	2	2												0

INTEGRATED HIGH PRODUCTIVITY 104
 INTEGRATED MEAN PRODUCTIVITY 94

STANDARD DEVIATIONS
 .06 .07 .07
 -15371 419

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
316	0	0	487.03	379
STANDARD DEVIATIONS				
.05	0			

GULF OF GUAYAQUIL CRUISE 6210 STATION 5- 0 LAT. 02 52.0 S LONG. 80 51.0 W DATE 13 APR 1962
 TIME 0718-0728 WEATHER CLOUD COVER 5/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 195-205 T
 SECCHI DISK DEPTH 10.0 M SEA TEMP. 25.6 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 757 MM TIDE EBBING 2/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
0234	0	100.0	88	83		-191	-522	141			0
0234	2.5	50.0	4	3							0
0234	8.0	14.6	7	5							0
0234	16.0	1.0	2	1							0

INTEGRATED HIGH PRODUCTIVITY 98
 INTEGRATED MEAN PRODUCTIVITY 84

STANDARD DEVIATIONS
 .11 .12
 -15815 756

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED C14/02 PER 02 PROD	MATTER SFC AMOUNT MG/M3	331 STANDARD DEVIATIONS .06
	0	0			

GULF OF GUAYAQUIL CRUISE 6211 STATION V- 0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 24 APR 1962
 TIME 0623- WEATHER 01 CLOUD COVER 10/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 315-325 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 27.7 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 759 MM TIDE EBBING 8/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
0246	0	100.0	157	154		0	-522	0			0
0246	.3	50.0	65	55							0
0246	.6	14.6	25	25							0
0246	1.2	1.0	2	2							0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

45
 41

STANDARD DEVIATIONS
 .11 .12 .12

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
0	0	0	0	0

STANDARD DEVIATIONS
 .06

GULF OF GUAYAQUIL CRUISE 6211 STATION Q- 0 LAT. 03 11.9 S LONG. 80 16.3 W DATE 25 APR 1962
 TIME 1747- WEATHER 01 CLOUD COVER 5/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 25.2 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 757 MM TIDE EBBING 7/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. GROSS PROD MG/M2	SIG
						PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M3		
0270	0	100.0	135	123		0	-522			0			0
0270	.7	50.0	29	28									0
0270	1.5	14.6	25	19									0
0270	3.0	1.0	5	5									0

INTEGRATED HIGH PRODUCTIVITY 88
 INTEGRATED MEAN PRODUCTIVITY 79

STANDARD DEVIATIONS
 .11 .12 .12

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

0 0 0
 STANDARD DEVIATIONS
 .06 0

GULF OF GUAYAQUIL CRUISE 6212 STATION V- 0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 8 MAY 1962
 TIME 0609- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 27.0 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 758 MM TIDE EBBING 7/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
0282	0	100.0	98	94		517	373	662								0
0282	.3	50.0	41	38												0
0282	.5	14.6	19	17												0
0282	1.2	1.0	0	0												0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

27
 25

-184

178

STANDARD DEVIATIONS
 .06 .06 .06

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC NIGHT
 RESP.
 MG/M3

107.73

2.13

308

STANDARD DEVIATIONS
 .01

GULF OF GUAYAQUIL CRUISE 6212 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 9 MAY 1962
 TIME 0538- WEATHER CLOUD COVER WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 26.2 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 758 MM TIDE EBBING 4/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	GROSS PROD MG/M2	SIG
0294	0	100.0	239	239		662	578	746			0
0294	.3	50.0	177	159							0
0294	.5	14.6	85	84							0
0294	1.2	1.0	3	2							0

INTEGRATED HIGH PRODUCTIVITY 100
 INTEGRATED MEAN PRODUCTIVITY 94

STANDARD DEVIATIONS
 .14 .14 .14
 -9 201

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

84 46
 STANDARD DEVIATIONS .54 591
 .02 .04

GULF OF GUAYAQUIL CRUISE 6212 STATION Q-0 LAT. 03 11.9 S LONG. 80 16.3 W DATE 9 MAY 1962
 TIME 1445- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY 12KT (6.0 M/SEC) WIND DIR. 265-275 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 26.5 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 757 MM TIDE EBBING 0/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		GROSS PROD MG/M3	E.Z. NET(24)		GROSS PROD MG/M2	SIG
						PROD	MG/M3		PROD	MG/M2		
0306	0	100.0	325	314				587	518		655	0
0306	.5	50.0	94	91								0
0306	1.2	14.6	41	37								0
0306	2.5	1.0	-3	-3								0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

152
145

9

353

STANDARD DEVIATIONS
 .15 .16 .16

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC NIGHT
 RESP.
 MG/M3

62.51

410

3.92

270

STANDARD DEVIATIONS
 .06 .07

GULF OF GUAYAQUIL CRUISE 6213 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 15 MAY 1962
 TIME 0603- WEATHER CLOUD COVER WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 55- 65 I
 SECCHI DISK DEPTH 8.0 M SEA TEMP. 25.1 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 759 MM TIDE FLOODING, -8/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		E.Z. GROSS		SIG
						PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M2	PROD MG/M2	PROD MG/M2	PROD MG/M2			
0318	0	100.0	121	109			358	216			501					0
0318	3.2	50.0	1	1												0
0318	8.5	14.6	4	4												0
0318	20.0	1.0	1	0												0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

109
98

STANDARD DEVIATIONS
 .03 .07 .07
 -3545 2154

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

142 0
 STANDARD DEVIATIONS
 .06 0

GULF OF GUAYAQUIL CRUISE 6213 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 16 MAY 1962
 TIME 0626- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 315-325 T
 SECCHI DISK DEPTH 7.0 M SEA TEMP. 24.7 C AIR TEMP. (WET) C AIR TEMP. (DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 758 MM TIDE FLOODING, -8/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
0330	0	100.0	178	160		450	390	509			0
0330	2.8	50.0	10	10							0
0330	7.5	14.6	1	0							0
0330	15.0	1.0	3	2							0

INTEGRATED HIGH PRODUCTIVITY 178
 INTEGRATED MEAN PRODUCTIVITY 162

STANDARD DEVIATIONS
 .05 .06 .06
 -176 1919

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

60 0
 STANDARD DEVIATIONS
 .02 0

GULF OF GUAYAQUIL CRUISE 6213 STATION 7- 0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 18 MAY 1962
 TIME 0510- WEATHER CLOUD COVER WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH -0 M SEA TEMP. 23.9 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 759 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
0342	0	100.0	0	0	0	89	40	137			0
0342		50.0	0	0							0
0342		14.6	0	0							0
0342		1.0	0	0							0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

0
 0

STANDARD DEVIATIONS
 .04 .05 .05

-0

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

48
 STANDARD DEVIATIONS
 .03

0

0

GULF OF GUAYAQUIL CRUISE 6214 STATION V- 0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 30 MAY 1962
 TIME 0553- WEATHER CLOUD COVER WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 305-315 T
 SECCHI DISK DEPTH 2 M SEA TEMP. 26.7 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 761 MM TIDE FLOODING, -5/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	GROSS PROD MG/M2	SIG
0354	0	100.0	146	144		517	373	662			0
0354	.2	50.0	62	53							0
0354	.3	14.6	24	20							0
0354	.5	1.0	0	0							0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

20
18

STANDARD DEVIATIONS
 .06 .06 .06
 -73 71

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

100.18 663

.92

145 133
 STANDARD DEVIATIONS
 .01 .05

GULF OF GUAYAQUIL CRUISE 6214 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 31 MAY 1962
 TIME 0546- WEATHER CLOUD COVER WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH .8 M SEA TEMP. 25.9 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 758 MM TIDE FLOODING, -3/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		E.Z.		SIG
						PROD MG/M3	GROSS PROD MG/M3	PROD MG/M3	GROSS PROD MG/M3	PROD MG/M2	GROSS PROD MG/M2	
0366	0	100.0	266	262		690	610	769				0
0366	.4	50.0	167	163								0
0366	.8	14.6	55	52								0
0366	1.2	1.0	-0	-1								0

INTEGRATED HIGH PRODUCTIVITY 194
 INTEGRATED MEAN PRODUCTIVITY 186

STANDARD DEVIATIONS
 .07 .08 .08

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

80 169
 76.30 587

STANDARD DEVIATIONS
 .05 .03

GULF OF GUAYAQUIL CRUISE 6214 STATION Q- 0 LAT. 03 11.9 S LONG. 80 16.3 W DATE 31 MAY 1962
 TIME 1415- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 25.1 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 758 MM TIDE EBBING 10/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	E.Z. GROSS PROD MG/M2	SIG
0378	0	100.0	328	323		381	213	548			0
0378	.6	50.0	221	210							0
0378	1.5	14.6	90	80							0
0378	3.5	1.0	2	2							0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

349
 329

STANDARD DEVIATIONS
 .06 .08 .08
 -814 442

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED C14/02 PER 02 PROD	MATTER SFC AMOUNT MG/M3
168	390	2.33	71.64	393

STANDARD DEVIATIONS
 .05 .11

GULF OF GUAYAQUIL CRUISE 6216 STATION V-0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 11 JUN 1962
 TIME 0655- WEATHER CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 25.6 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 759 MM TIDE EBBING 0/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
0390	0	100.0	270	266		397	334	460			1
0390	.5	50.0	80	76							1
0390	1.2	14.6	27	24							1
0390	2.5	1.0	2	2							1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

125
 118
 STANDARD DEVIATIONS
 .16 .16 .16
 -68 247

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
63	0	0	55.87	257
STANDARD DEVIATIONS .05 0				

GULF OF GUAYAQUIL CRUISE 6216 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 12 JUN 1962
 TIME 0555- WEATHER 01 CLOUD COVER WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 345-355 T
 SECCHI DISK DEPTH 1.2 M SEA TEMP. C AIR TEMP. (WET) C AIR TEMP. (DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 757 MM TIDE FLOODING, -9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS PROD MG/M3	E.Z. GROSS PROD MG/M2		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3		PROD MG/M2	MG/M2	
0402	0	100.0	184	182		227	116			339			0
0402	.5	50.0	80	79									0
0402	1.2	14.6	9	9									0
0402	2.5	1.0	2	2									0

INTEGRATED HIGH PRODUCTIVITY 91
 INTEGRATED MEAN PRODUCTIVITY 90

STANDARD DEVIATIONS
 .05 .06 .06
 -449 219

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER SFC AMOUNT MG/M3
			C14/02 PER 02 PROD	79.01	
111	90	.81		267	
STANDARD DEVIATIONS					
.02	.05				

GULF OF GUAYAQUIL CRUISE 6216 STATION Q-0 LAT. 03 11.9 S LONG. 80 16.3 W DATE 12 JUN 1962
 TIME 1604- WEATHER 03 CLOUD COVER 9/10 WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 25.3 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 758 MM TIDE FLOODING, -6/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS PROD MG/M3	E.Z. NET(24)		GROSS PROD MG/M2	SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3		PROD MG/M2	MG/M2		
0414	0	100.0	416	395		798	681	915					0	
0414	.6	50.0	335	293									0	
0414	1.5	14.6	152	143									0	
0414	3.7	1.0	6	5									0	

INTEGRATED HIGH PRODUCTIVITY 547
 INTEGRATED MEAN PRODUCTIVITY 499

STANDARD DEVIATIONS
 .15 .16 .16
 -139 738

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

117 173 637

1.48

STANDARD DEVIATIONS
 .03 .04

GULF OF GUAYAQUIL CRUISE 6216 STATION T- 0 LAT. 03 08.6 S LONG. 80 16.3 W DATE 13 JUN 1962
 TIME 0956- WEATHER 01 CLOUD COVER 4/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 345-355 T
 SECCHI DISK DEPTH 3.0 M SEA TEMP. 24.5 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM TIDE EBBING 4/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
0426	0	100.0	301	275			532	438			627					0
0426	.6	50.0	65	53												0
0426	1.5	14.6	42	35												0
0426	3.7	1.0	2	1												0

INTEGRATED HIGH PRODUCTIVITY 176
 INTEGRATED MEAN PRODUCTIVITY 150

STANDARD DEVIATIONS
 .12 .12 .12
 -408 1012

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
95	345	3.64	71.24	447

STANDARD DEVIATIONS
 .02 .03

GULF OF GUAYAQUIL CRUISE 6217 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 19 JUN 1962
 TIME 0642- WEATHER 01 CLOUD COVER 10/10 WIND VELOCITY 12KT (6.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH 12.0 M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 761 MM TIDE FLOODING, -1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	
0438	0	100.0	39	39		-94	-443	255					0	
0438	4.0	50.0	1	1									0	
0438	12.5	14.6	2	2									0	
0438	15.0	1.0	1	1									0	

INTEGRATED HIGH PRODUCTIVITY 41
 INTEGRATED MEAN PRODUCTIVITY 39

STANDARD DEVIATIONS
 .05 .10 .10
 -19310 1648

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
349	0	0	221.64	566
STANDARD DEVIATIONS				
.08	0			

GULF OF GUAYAQUIL CRUISE 6217 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 20 JUN 1962
 TIME 0643-0652 WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. -
 SECCHI DISK DEPTH 9.0 M SEA TEMP. 23.5 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 759 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M2	PROD MG/M2	PROD MG/M2	PROD MG/M2			
0450	0	100.0	108	103		-16	-219			187						0
0450	4.0	50.0	5	4												0
0450	11.0	14.6	7	6												0
0450	25.0	1.0	1	0												0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

172
 154

-8238

907

STANDARD DEVIATIONS
 .20 .22 .22

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

153.37 287

0

203
 STANDARD DEVIATIONS
 .08

GULF OF GUAYAQUIL CRUISE 6217 STATION 7- 0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 21 JUN 1962
 TIME 0523- WEATHER CLOUD COVER WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 275-285 J
 SECCHI DISK DEPTH 9.0 M SEA TEMP. 22.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 758 MM TIDE EBBING 9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. PROD MG/M2		SIG
						PROD	MG/M3	PROD	MG/M3	PROD	MG/M3	PROD	MG/M2	
0462	0	100.0	150	145			-37		-297		224			0
0462	3.0	50.0	83	80										0
0462	9.0	14.6	52	46										0
0462	22.0	1.0	1	-0										0

INTEGRATED HIGH PRODUCTIVITY 901
 INTEGRATED MEAN PRODUCTIVITY 697

STANDARD DEVIATIONS
 .13 .13 .13
 -10635 1083

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/O2 PER O2 PROD	SFC AMOUNT MG/M3
260	0	0	151.67	339
STANDARD DEVIATIONS .03	0			

GULF OF GUAYAQUIL CRUISE 6219 STATION V- 0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 4 JUL 1962
 TIME 0515- WEATHER CLOUD COVER WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 24.4 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 759 MM TIDE EBBING 7/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS PROD MG/M2	SIG
						PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M2	PROD MG/M2	PROD MG/M2	PROD MG/M2		
0487	0	100.0	315	315		687	579	795							1
0487	.4	50.0	125	123											1
0487	.8	14.6	80	73											1
0487	2.0	1.0	3	2											1

INTEGRATED HIGH PRODUCTIVITY 146
 INTEGRATED MEAN PRODUCTIVITY 141

STANDARD DEVIATIONS
 .04 .04 .04
 -56 214

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER SFC AMOUNT MG/M3
			C14/02 PER 02 PROD	74.03	
108	-30	-.28		589	
STANDARD DEVIATIONS .02					

GULF OF GUAYAQUIL CRUISE 6219 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 5 JUL 1962
 TIME 0615- WEATHER CLOUD COVER WIND VELOCITY 12KT (6.0 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 24.2 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 759 MM TIDE EBBING 8/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS PROD MG/M3	E.Z. NET(24)		GROSS PROD MG/M2	SIG
						PROD MG/M3	PROD MG/M3	PROD MG/M2	PROD MG/M2					
0499	0	100.0	198	190		509	449			568				1
0499	.3	50.0	64	61										1
0499	.5	14.6	27	25										1
0499	1.2	1.0	1	1										1

INTEGRATED HIGH PRODUCTIVITY 45
 INTEGRATED MEAN PRODUCTIVITY 43

STANDARD DEVIATIONS
 .06 .06 .06

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

59 46 .78 437
 STANDARD DEVIATIONS
 .03 .06

GULF OF GUAYAQUIL CRUISE 6219 STATION Q- 0 LAT. 03 11.9 S LONG. 80 16.3 W DATE 5 JUL 1962
 TIME 1451- WEATHER 01 CLOUD COVER 4/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 315-325 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 24.2 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 758 MM TIDE EBBING 2/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
0511	0	100.0	184	174		389	298	481			1
0511	.6	50.0	54	53							1
0511	1.5	14.6	22	19							1
0511	3.7	1.0	2	2							1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

118
 111

-296

STANDARD DEVIATIONS

.05 .05 .05

388

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC NIGHT
 RESP.
 MG/M3

82.77

1.37

125

91

STANDARD DEVIATIONS
 .03 .04

398

GULF OF GUAYAQUIL CRUISE 6221 STATION V-0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 23 JUL 1962
 TIME 0632- WEATHER 01 CLOUD COVER 10/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 305-315 T
 SECCHI DISK DEPTH .5 M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM TIDE EBBING 4/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
0523	0	100.0	77	77		556	515	597								0
0523	.5	50.0	46	37												0
0523	1.2	14.6	32	32												0
0523	2.5	1.0	1	1												0

INTEGRATED HIGH PRODUCTIVITY 68
 INTEGRATED MEAN PRODUCTIVITY 61

STANDARD DEVIATIONS
 .06 .07 .07

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

41 0 0 561
 STANDARD DEVIATIONS
 .02 0

GULF OF GUAYAQUIL CRUISE 6221 STATION P- 0 LAT. 03 08.6 S LONG. 80 04.0 W DATE 24 JUL 1962
 TIME 0541- WEATHER CLOUD COVER WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 22.6 C AIR TEMP. (WET) C AIR TEMP. (DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM TIDE EBBING 2/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
0535	0	100.0	91	91		420	365	476			0
0535	.6	50.0	60	59							0
0535	1.5	14.6	27	25							0
0535	3.7	1.0	1	1							0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

101
 98

STANDARD DEVIATIONS
 .02 .03 .03
 -33 397

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

55 0 0
 STANDARD DEVIATIONS
 .02 0

GULF OF GUAYAQUIL CRUISE 6222 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 25 JUL 1962
 TIME 0635- WEATHER 03 CLOUD COVER WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 10.0 M SEA TEMP. 22.6 C AIR TEMP. (WET) C AIR TEMP. (DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 761 MM TIDE EBBING 3/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E-Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E-Z. NET(24) PROD MG/M2	GROSS PROD MG/M2	SIG
0547	0	100.0	10	9		126	265	-12			0
0547	3.0	50.0	9	6							0
0547	11.0	14.6	3	3							0
0547	15.0	1.0	0	0							0

INTEGRATED HIGH PRODUCTIVITY 75
 INTEGRATED MEAN PRODUCTIVITY 59

STANDARD DEVIATIONS
 .09 .21 .21
 6857 -67

SFC DAY	SFC NIGHT	DAY/NIGHT	SECRETED	MATTER
RESP.	RESP.		C14/02	SFC
MG/M3	MG/M3		PER 02	AMOUNT
			PROD	MG/M3
-138	0	0	1291.84	-160
STANDARD DEVIATIONS				
.19	0			

GULF OF GUAYAQUIL CRUISE 6222 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 26 JUL 1962
 TIME 0635- WEATHER 01 CLOUD COVER WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 6.0 M SEA TEMP. 21.3 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 757 MM TIDE EBBING 1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	NET(24) PROD MG/M2	GROSS PROD MG/M2		
0559	0	100.0	49	41		217	86	348					0	
0559	2.5	50.0	32	28									0	
0559	6.5	14.6	12	11									0	
0559	13.0	1.0	1	1									0	

INTEGRATED HIGH PRODUCTIVITY 212
 INTEGRATED MEAN PRODUCTIVITY 185

STANDARD DEVIATIONS
 .15 .16 .16
 -2815 1125

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/O2 PER O2 PROD	SFC AMOUNT MG/M3
131	0	0	0	0

STANDARD DEVIATIONS
 .04

GULF OF GUAYAQUIL CRUISE 6222 STATION 7-0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 28 JUL 1962
 TIME 0635- WEATHER CLOUD COVER WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 6.5 M SEA TEMP. 21.2 C AIR TEMP. (WET) C AIR TEMP. (DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 761 MM TIDE FLOODING, -9/10

SAMPLE NUMBER	DEPTH M	O/C INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M2	PROD MG/M2	PROD MG/M2	PROD MG/M2	
0571	0	100.0	28	20		-61	-205	83					0	
0571	2.5	50.0	9	7									0	
0571	6.5	14.6	6	6									0	
0571	13.0	1.0	0	0									0	

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

83
 65
 STANDARD DEVIATIONS
 .05 .06 .06
 -4398 291

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
144	0	0	0	0

STANDARD DEVIATIONS
 .04 0

GULF OF GUAYAQUIL CRUISE 6223 STATION V- 0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 1 AUG 1962
 TIME 0518- WEATHER CLOUD COVER WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 23.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM TIDE EBBING 9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2			
0583	0	100.0	95	68		535	452	618								0
0583	.3	50.0	59	56												0
0583	.5	14.6	12	12												0
0583	1.2	1.0	0	0												0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

29
25

-40 166

STANDARD DEVIATIONS
 .05 .06 .06

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC DAY SFC NIGHT
 RESP.
 MG/M3

0 0

.51

83 42
 STANDARD DEVIATIONS
 .01 .01

GULF OF GUAYAQUIL CRUISE 6223 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 2 AUG 1962
 TIME 0623- WEATHER 01 CLOUD COVER WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 23.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM TIDE EBBING 10/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD	MG/M3	PROD	MG/M3	PROD	MG/M3	NET(24)	PROD	
0595	0	100.0	99	99				785	707	864				0
0595	.3	50.0	69	52										0
0595	.5	14.6	26	26										0
0595	1.2	1.0	0	0										0

INTEGRATED HIGH PRODUCTIVITY 35
 INTEGRATED MEAN PRODUCTIVITY 31

STANDARD DEVIATIONS
 .33 .33 .33

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. MG/M3

79 72
 STANDARD DEVIATIONS .01 .03 .91 844

GULF OF GUAYAQUIL CRUISE 6223 STATION P- 0 LAT. 03 08.6 S LONG. 80 04.0 W DATE 2 AUG 1962
 TIME 1245- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 295-305 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 23.0 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM TIDE EBBING 0/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
0607	0	100.0	73	65		349	253	446			0
0607	.6	50.0	34	34							0
0607	1.5	14.6	12	12							0
0607	3.7	1.0	1	1							0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

62
58

STANDARD DEVIATIONS
 .04 .09 .09
 -364 360

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

96
 STANDARD DEVIATIONS
 .08

0 0 0

GULF OF GUAYAQUIL CRUISE 6225 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 14 AUG 1962
 TIME 0635- WEATHER 02 CLOUD COVER WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 9.0 M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 761 MM TIDE FLOODING, -6/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS PROD MG/M3	E.Z. NET(24)		GROSS PROD MG/M2	SIG
						PROD MG/M3	PROD MG/M3	PROD MG/M2	PROD MG/M2					
0619	0	100.0	47	37		477	402	552						1
0619	2.5	50.0	31	31										1
0619	5.5	14.6	19	15										1
0619	10.0	1.0	-0	-0										1

INTEGRATED HIGH PRODUCTIVITY 170
 INTEGRATED MEAN PRODUCTIVITY 152

STANDARD DEVIATIONS
 .12 -704 2673
 .15 .15

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RES.
 MG/M3 MG/M3

75 0 0
 STANDARD DEVIATIONS
 .09 0

GULF OF GUAYAQUIL CRUISE 6225 STATION 9-0 LAT. 03 08.0 S LONG. 80 35.0 W DATE 14 AUG 1962
 TIME 1620- WEATHER 03 CLOUD COVER 7-8/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 8.0 M SEA TEMP. 21.7 C AIR TEMP. (WET) C AIR TEMP. (DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 759 MM TIDE FLOODING, -1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD	MG/M3	PROD	MG/M3	PROD	MG/M3	NET(24)	PROD	
0631	0	100.0	23	11										1
0631	4.0	50.0	4	4										1
0631	10.5	14.6	2	1										1
0631	25.0	1.0	-0	-0										1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

61
42
 STANDARD DEVIATIONS
 .23 .26 .26
 -1221 -24

SECRETED
 C14/02
 PER 02
 PROD
 MATTER
 SFC
 AMOUNT
 MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3
 30 0 0
 STANDARD DEVIATIONS
 .12 0

GULF OF GUAYAQUIL CRUISE 6225 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 16 AUG 1962
 TIME 0655- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 10.0 M SEA TEMP. 21.4 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 759 MM TIDE FLOODING, -3/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	GROSS PROD MG/M2	SIG
0643	0	100.0	16	13		73	-46	192			1
0643	4.0	50.0	1	1							1
0643	10.5	14.6	2	2							1
0643	25.0	1.0	-0	-0							1

INTEGRATED HIGH PRODUCTIVITY 22
 INTEGRATED MEAN PRODUCTIVITY 17

STANDARD DEVIATIONS
 .20 .21 .21
 -4909 1032

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED C14/02 PER 02 PROD	MATTER SFC AMOUNT MG/M3	0	0	0
119	0	0					
STANDARD DEVIATIONS	0						
.07							

GULF OF GUAYAQUIL CRUISE 6226 STATION V- 7 LAT. 02 34.0 S LONG. 80 06.5 W DATE 4 OCT 1962
 TIME 1314-1334 WEATHER 01 CLOUD COVER 4/10 WIND VELOCITY 13KT (6.5 M/SEC) WIND DIR. 195-205 T
 SECCHI DISK DEPTH .8 M SEA TEMP. 26.0 C AIR TEMP.(WET) 22.1 C AIR TEMP.(DRY) 25.1 C
 RELATIVE HUMIDITY 77 0/0 BAROMETER 759 MM TIDE FLOODING, -9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
0667	0	100.0	97	78		510	346	675					0	
0667	.3	50.0	121	113									0	
0667	.5	14.6	24	20									0	
0667	1.3	1.0	0	0									0	

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

454
 398

-367 290

STANDARD DEVIATIONS
 .10 .13 .13

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

0 0 0

0

STANDARD DEVIATIONS
 .07 0

164
 0

GULF OF GUAYAQUIL CRUISE 6226 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 5 OCT 1962
 TIME 1631- WEATHER 02 CLOUD COVER 9/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 205-215 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 25.5 C AIR TEMP.(WET) 21.8 C AIR TEMP.(DRY) 24.9 C
 RELATIVE HUMIDITY 77 0/0 BAROMETER 759 MM TIDE EBBING 1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	GROSS PROD MG/M2	SIG
0655	0	100.0	68	67		170	-100	440			1
0655	.5	50.0	48	44							1
0655	1.2	14.6	22	21							1
0655	2.5	1.0	0	0							1

INTEGRATED HIGH PRODUCTIVITY 57
 INTEGRATED MEAN PRODUCTIVITY 54

STANDARD DEVIATIONS
 .07 .09 .09
 -556 118

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

270 0 0 643
 STANDARD DEVIATIONS 0
 .06

GULF OF GUAYAQUIL CRUISE 6226 STATION P- 0 LAT. 03 08.6 S LONG. 80 04.0 W DATE 5 OCT 1962
 TIME 0504- WEATHER CLOUD COVER WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 285-295 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 24.1 C AIR TEMP.(WET) 19.8 C AIR TEMP.(DRY) 20.9 C
 RELATIVE HUMIDITY 91 0/0 BAROMETER 760 MM TIDE EBBING 5/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS PROD MG/M2	SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2		
0679	0	100.0	86	82			418	295			541				0
0679	.5	50.0	72	62											0
0679	1.2	14.6	12	12											0
0679	2.5	1.0	1	1											0

INTEGRATED HIGH PRODUCTIVITY 69
 INTEGRATED MEAN PRODUCTIVITY 62

STANDARD DEVIATIONS
 .07 .12 .12
 -325 291

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
123	0	0	107.57	582
STANDARD DEVIATIONS				
.10	0			

GULF OF GUAYAQUIL CRUISE 6227 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 16 OCT 1962
 TIME 0733-0744 WEATHER 03 CLOUD COVER WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 285-295 T
 SECCHI DISK DEPTH 6.0 M SEA TEMP. C AIR TEMP.(WET) 21.2 C AIR TEMP.(DRY) 19.2 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 762 MM TIDE FLOODING, -2/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
0691	0	100.0	0	0		10	-33	52			0
0691		50.0	0	0							0
0691	6.5	14.6	0	0							0
0691	15.0	1.0	0	0							0

INTEGRATED HIGH PRODUCTIVITY 0
 INTEGRATED MEAN PRODUCTIVITY 0

STANDARD DEVIATIONS
 .09 .12 .12
 -1104 169

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
42	0	0	181.13	95
STANDARD DEVIATIONS .08 0				

GULF OF GUAYAQUIL CRUISE 6227 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 17 OCT 1962
 TIME 0728- WEATHER 03 CLOUD COVER 7-8/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH 15.0 M SEA TEMP. C AIR TEMP.(WET) 21.5 C AIR TEMP.(DRY) 20.3 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 761 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		E.Z. GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
0703	0	100.0	0	0	0	-60	-124	3								0
0703	7.0	50.0	0	0												0
0703	16.0	14.6	0	0												0
0703	33.0	1.0	0	0												0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

0
 0
 STANDARD DEVIATIONS
 .17 .19 .19
 -4731 26

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
63	0	0	0	0

STANDARD DEVIATIONS
 .09

GULF OF GUAYAQUIL CRUISE 6227 STATION 7- 0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 19 OCT 1962
 TIME 0403- WEATHER CLOUD COVER WIND VELOCITY 15KT (7.5 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH 19.0 M SEA TEMP. C AIR TEMP. (WET) 19.3 C AIR TEMP. (DRY) 20.9 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER -0 MM TIDE EBBING 3/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z.		E.Z.		E.Z.		SIG
					PROD	MG/M2	NET(12) PROD	MG/M3	NET(24) PROD	MG/M2	
0715	0	100.0	0	0			-40	-212	133		0
0715	7.5	50.0	0	0							0
0715	20.0	14.6	0	0							0
0715	47.0	1.0	0	0							0

INTEGRATED HIGH PRODUCTIVITY 0
 INTEGRATED MEAN PRODUCTIVITY 0

STANDARD DEVIATIONS
 .12 .14 .14
 -15059 1362

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

173 0 0
 STANDARD DEVIATIONS
 .07

GULF OF GUAYAQUIL CRUISE 6228 STATION V- 0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 30 OCT 1962
 TIME 0543- WEATHER CLOUD COVER WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 205-215 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 24.6 C AIR TEMP.(WET) 20.1 C AIR TEMP.(DRY) 22.2 C
 RELATIVE HUMIDITY 0/0 BAROMETER 762 MM TIDE EBBING 10/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z.		NET(12) PROD MG/M3	NET(24)		GROSS PROD MG/M3	E.Z.		GROSS PROD MG/M2	SIG
					PROD	MG/M2		PROD	MG/M2		PROD	MG/M2		
0727	0	100.0	79	75			437	290		585			1	1
0727	.5	50.0	83	82									1	1
0727	1.2	14.6	26	22									1	1
0727	2.5	1.0	1	1									1	1

INTEGRATED HIGH PRODUCTIVITY 208
 INTEGRATED MEAN PRODUCTIVITY 197

STANDARD DEVIATIONS
 .22 .31 .31
 -422 315

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER SFC AMOUNT MG/M3
			C14/02 PER 02 PROD	112.45	
147	0	0		658	
STANDARD DEVIATIONS .22	0				

GULF OF GUAYAQUIL CRUISE 6228 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 31 OCT 1962
 TIME 0548- WEATHER CLOUD COVER WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 285-295 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 24.5 C AIR TEMP.(WET) 20.3 C AIR TEMP.(DRY) 22.2 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 760 MM TIDE EBBING 9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. PROD MG/M2	E.Z. GROSS PROD MG/M2	SIG
0739	0	100.0	64	58		350	235	465			1
0739	.3	50.0	41	41							1
0739	.5	14.6	10	10							1
0739	1.2	1.0	0	0							1

INTEGRATED HIGH PRODUCTIVITY 20
 INTEGRATED MEAN PRODUCTIVITY 19

STANDARD DEVIATIONS
 .10 .12 .12
 -162 125

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED C14/02 PER 02 PROD	MATTER SFC AMOUNT MG/M3
115	0	0	112.14	521
STANDARD DEVIATIONS				
.07	0			

GULF OF GUAYAQUIL CRUISE 6229 STATION V- 0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 14 NOV 1962
 TIME 0643- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 25.3 C AIR TEMP.(WET) 21.0 C AIR TEMP.(DRY) 23.2 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 760 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
0763	0	100.0	109	90		654	620	688			1
0763	.3	50.0	42	40							1
0763	.5	14.6	15	13							1
0763	1.2	1.0	0	0							1

INTEGRATED HIGH PRODUCTIVITY 27
 INTEGRATED MEAN PRODUCTIVITY 23

STANDARD DEVIATIONS
 .08 .09 .09

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

34 0 0 0
 STANDARD DEVIATIONS
 .04 0

GULF OF GUAYAQUIL CRUISE 6229 STATION F-2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 15 NOV 1962
 TIME 0653- WEATHER 01 CLOUD COVER 6/10 WIND VELOCITY 1KT (.5 M/SEC) WIND DIR. 285-295 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 25.1 C AIR TEMP.(WET) 20.0 C AIR TEMP.(DRY) 21.6 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 761 MM TIDE EBBING 10/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	E.Z. GROSS PROD MG/M2	SIG
0778	0	100.0	110	100		943	705	1180			1
0778	.5	50.0	69	57							1
0778	1.2	14.6	13	11							1
0778	2.5	1.0	-0	-0							1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

72
62

-553

635

STANDARD DEVIATIONS
 .13 .16 .16

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

238
STANDARD DEVIATIONS
 .09

0

0

0

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

GULF OF GUAYAQUIL CRUISE 6229 STATION P- 2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 16 NOV 1962
 TIME 0643- WEATHER CLOUD COVER WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 345-355 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 23.3 C AIR TEMP.(WET) 20.8 C AIR TEMP.(DRY) 22.7 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 761 MM TIDE EBBING 10/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD	MG/M3	PROD	MG/M3	PROD	MG/M3	NET(24)	PROD	
0793	0	100.0	36	31				278	205		351			1
0793	.5	50.0	16	14										1
0793	1.2	14.6	6	5										1
0793	2.5	1.0	1	0										1

INTEGRATED HIGH PRODUCTIVITY 22
 INTEGRATED MEAN PRODUCTIVITY 19

STANDARD DEVIATIONS
 .11 .13 .13
 -175 189

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

73 0 0 0
 STANDARD DEVIATIONS
 .08 0

GULF OF GUAYAQUIL CRUISE 6230 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 21 NOV 1962
 TIME 0623- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 315-325 T
 SECCHI DISK DEPTH 10.0 M SEA TEMP. 23.4 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 22.3 C
 RELATIVE HUMIDITY 99 0/0 BAROMETER 759 MM TIDE EBBING 0/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	GROSS PROD MG/M2	
0815	0	100.0	6	6		38		-41		117				0
0815	4.0	50.0	1	0										0
0815	10.0	14.6	0	0										0
0815	21.0	1.0	0	-0										0

INTEGRATED HIGH PRODUCTIVITY 12
 INTEGRATED MEAN PRODUCTIVITY 9

STANDARD DEVIATIONS
 .08 .09 .09
 -3323 630

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
79	0	0	162.84	191
STANDARD DEVIATIONS .04 0				

GULF OF GUAYAQUIL CRUISE 6230 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 22 NOV 1962
 TIME 0633- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 11.0 M SEA TEMP. 23.2 C AIR TEMP.(WET) 22.9 C AIR TEMP.(DRY) 23.0 C
 RELATIVE HUMIDITY 99 0/0 BAROMETER 759 MM TIDE FLOODING,-10/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	E.Z. GROSS PROD MG/M2	SIG
0827	0	100.0	12	11		33	-60	126			0
0827	2.0	50.0	2	1							0
0827	6.0	14.6	1	0							0
0827	23.0	1.0	0	0							0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

21
18

746

-4364

STANDARD DEVIATIONS
 .07 .11 .11

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC NIGHT
 RESP.
 MG/M3

164.87 208

0

93
 STANDARD DEVIATIONS
 .08

GULF OF GUAYAQUIL CRUISE 6230 STATION 7- 0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 23 NOV 1962
 TIME 0628- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 315-325 T
 SECCHI DISK DEPTH 11.0 M SEA TEMP. 23.2 C AIR TEMP.(WET) 22.8 C AIR TEMP.(DRY) 22.8 C
 RELATIVE HUMIDITY 99 0/0 BAROMETER 759 MM TIDE FLOODING, -9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		E.Z. GROSS	
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2
0839	0	100.0	3	2		58	-22	137							0
0839	4.0	50.0	1	1											0
0839	12.0	14.6	0	0											0
0839	24.0	1.0	1	0											0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

11 1
 14 1

STANDARD DEVIATIONS
 .07 .09 .09
 -3560 813

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC NIGHT
 RESP.
 MG/M3

80
 STANDARD DEVIATIONS
 .06

0

GULF OF GUAYAQUIL CRUISE 6231 STATION V- 0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 28 NOV 1962
 TIME 0648-- WEATHER CLOUD COVER 10/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 215-225 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 24.9 C AIR TEMP.(WET) 20.6 C AIR TEMP.(DRY) 22.5 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 761 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M2	PROD MG/M3	MG/M2	PROD MG/M3	MG/M2	PROD MG/M2	MG/M2	
0852	0	100.0	101	84		365	-37				767			1
0852	.5	50.0	57	48										1
0852	1.2	14.6	20	16										1
0852	2.5	1.0	0	0										1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

68
56

STANDARD DEVIATIONS
 .28 .28 .28

-1599

413

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

402 0 0 0
 STANDARD DEVIATIONS
 .05 0

GULF OF GUAYAQUIL CRUISE 6231 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 29 NOV 1962
 TIME 0548- WEATHER CLOUD COVER WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 285-295 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 25.2 C AIR TEMP.(WET) 20.1 C AIR TEMP.(DRY) 22.8 C
 RELATIVE HUMIDITY 76 0/0 BAROMETER 759 MM TIDE EBBING 10/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z.		E.Z.		E.Z.		SIG
					PROD	MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	NET(24) PROD MG/M2	GROSS PROD MG/M2
0867	0	100.0	73	62			295	274	316		1
0867	.3	50.0	33	30							1
0867	.5	14.6	17	17							1
0867	1.2	1.0	-0	-1							1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

31
 28

32

85

STANDARD DEVIATIONS
 .12 .15 .15

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC NIGHT
 RESP.
 MG/M3

21
 STANDARD DEVIATIONS
 .10

0

0

GULF OF GUAYAQUIL CRUISE 6231 STATION P- 2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 30 NOV 1962
 TIME 0558- WEATHER CLOUD COVER 7-8/10 WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 23.0 C AIR TEMP.(WET) 21.0 C AIR TEMP.(DRY) 22.9 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 759 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
0879	0	100.0	48	40		135	3	267			1
0879	.6	50.0	10	9							1
0879	1.5	14.6	12	12							1
0879	3.7	1.0	0	0							1

INTEGRATED HIGH PRODUCTIVITY 35
 INTEGRATED MEAN PRODUCTIVITY 31

STANDARD DEVIATIONS
 .12 .12 .12
 -776 216

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

132 0 0 0
 STANDARD DEVIATIONS
 .03 0

GULF OF GUAYAQUIL CRUISE 6232 STATION V-0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 11 DEC 1962
 TIME 0643- WEATHER 50 CLOUD COVER 10/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 295-305 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 26.3 C AIR TEMP. (WET) 20.9 C AIR TEMP. (DRY) 23.2 C
 RELATIVE HUMIDITY 80 0/0 BAROMETER 761 MM TIDE FLOODING, -1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	E.Z. GROSS PROD MG/M2	SIG
0891	0	100.0	67	62		196	42	350			1
0891	.3	50.0	30	22							1
0891	.5	14.6	12	11							1
0891	1.2	1.0	0	0							1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

18
 15
 STANDARD DEVIATIONS
 .07 .10 .10

-291

94

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED C14/02 PER 02 PROD	MATTER SFC AMOUNT MG/M3
154	0	0	126.23	442
STANDARD DEVIATIONS				
.07	0			

GULF OF GUAYAQUIL CRUISE 6232 STATION F-2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 12 DEC 1962
 TIME 0638- WEATHER CLOUD COVER 10/10 WIND VELOCITY 9KT (4.5 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 26.4 C AIR TEMP.(WET) 21.1 C AIR TEMP.(DRY) 23.1 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 761 MM TIDE FLOODING, -1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	E.Z. GROSS PROD MG/M2	SIG
0906	.3	50.0	68	64							1
0906	.5	14.6	29	21							1
0906	1.2	1.0	0	0							1

INTEGRATED HIGH PRODUCTIVITY 39
 INTEGRATED MEAN PRODUCTIVITY 34

STANDARD DEVIATIONS
 .21 .24 .24

5 253

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RES.
 MG/M3 MG/M3

99 0 929

STANDARD DEVIATIONS
 .12 0

GULF OF GUAYAQUIL CRUISE 6232 STATION P-1 LAT. 03 08.6 S LONG. 80 04.0 W DATE 12 DEC 1962
 TIME 1332- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY 1KT (.5 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 26.9 C AIR TEMP.(WET) 24.0 C AIR TEMP.(DRY) 28.8 C
 RELATIVE HUMIDITY 67 0/0 BAROMETER 761 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
0918	0	100.0	35	25		261	73	449			1
0918	.5	50.0	24	15							1
0918	1.2	14.6	12	6							1
0918	2.5	1.0	-0	-0							1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

31
 19

STANDARD DEVIATIONS
 .26 .27 .27
 -697 241

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

188 0 0 0
 STANDARD DEVIATIONS
 .05 0

GULF OF GUAYAQUIL CRUISE 6233 STATION 3-0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 18 DEC 1962
 TIME 0643- WEATHER 01 CLOUD COVER 5/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 195-205 T
 SECCHI DISK DEPTH 15.0 M SEA TEMP. 23.8 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 25.3 C
 RELATIVE HUMIDITY 77 0/0 BAROMETER 762 MM TIDE EBBING 6/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD	MG/M3	PROD	MG/M3	PROD	MG/M3	PROD	MG/M2	PROD	MG/M2	
0933	0	100.0	1	1				44	18	70						1
0933	6.0	50.0	0	-0												1
0933	16.0	14.6	0	0												1
0933	20.0	1.0	0	0												1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

5
 1
 STANDARD DEVIATIONS
 .06 .07 .07
 -1409 567

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

26
 STANDARD DEVIATIONS
 .04

0 0 0

GULF OF GUAYAQUIL CRUISE 6233 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 19 DEC 1962
 TIME 0615- WEATHER 01 CLOUD COVER 5/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH 8.0 M SEA TEMP. 23.7 C AIR TEMP.(WET) 21.0 C AIR TEMP.(DRY) 22.6 C
 RELATIVE HUMIDITY 88 0/0 BAROMETER 762 MM TIDE EBBING 2/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD	MG/M3	PROD	MG/M3	PROD	MG/M3	PROD	MG/M2	PROD	MG/M2	
0945	0	100.0	19	18			8		-66		81					1
0945	3.0	50.0	3	3												1
0945	8.0	14.6	2	1												1
0945	20.0	1.0	0	0												1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

47
 40

STANDARD DEVIATIONS
 .02 .04 .04
 -2598 350

SFC DAY SFC NIGHT DAY/NIGHT SECRETED MATTER
 RESP. RESP. SFC
 MG/M3 MG/M3 AMOUNT
 PROD MG/M3

74 0 137
 STANDARD DEVIATIONS
 .04 0

GULF OF GUAYAQUIL CRUISE 6233 STATION 7- 0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 21 DEC 1962
 TIME 0551- WEATHER CLOUD COVER 10/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH 11.0 M SEA TEMP. 22.7 C AIR TEMP.(WET) 20.0 C AIR TEMP.(DRY) 22.1 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 762 MM TIDE EBBING 0/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		E.Z. GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
0957	0	100.0	17	17		110		77		142						1
0957	4.0	50.0	3	3												1
0957	11.0	14.6	1	1												1
0957	27.0	1.0	0	0												1

INTEGRATED HIGH PRODUCTIVITY 50
 INTEGRATED MEAN PRODUCTIVITY 47

STANDARD DEVIATIONS
 .07 .08 .08
 -930 838

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED C14/O2 PER O2 PROD	MATTER SFC AMOUNT MG/M3

STANDARD DEVIATIONS
 .04 0

GULF OF GUAYAQUIL CRUISE 6301 STATION V- 2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 9 JAN 1963
 TIME 0153- WEATHER CLOUD COVER WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 265-275 T
 SECCHI DISK DEPTH 1.2 M SEA TEMP. 27.0 C AIR TEMP.(WET) 20.6 C AIR TEMP.(DRY) 23.1 C
 RELATIVE HUMIDITY 80 0/0 BAROMETER 759 MM TIDE EBBING 5/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD	MG/M3	PROD	MG/M3	PROD	MG/M3	PROD	MG/M2	PROD	MG/M2	
1030	0	100.0	61	59			163		45		282					0
1030	.5	50.0	25	25												0
1030	1.2	14.6	4	3												0
1030	2.5	1.0	0	0												0

INTEGRATED HIGH PRODUCTIVITY 30
 INTEGRATED MEAN PRODUCTIVITY 28

STANDARD DEVIATIONS
 .02 .06 .06
 -528 182

SFC DAY	SFC NIGHT	DAY/NIGHT	SECRETED	MATTER
RESP.	RESP.		C14/02	SFC
MG/M3	MG/M3		PER 02	AMOUNT
			PROD	MG/M3
118	39	.33	121.21	341
STANDARD DEVIATIONS				
.06	.03			

GULF OF GUAYAQUIL CRUISE 6301 STATION F-2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 10 JAN 1963
 TIME 0623- WEATHER CLOUD COVER 10/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 135-145 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 26.4 C AIR TEMP.(WET) 20.8 C AIR TEMP.(DRY) 23.7 C
 RELATIVE HUMIDITY 77 0/0 BAROMETER 761 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	E.Z. GROSS PROD MG/M2	SIG
1042	0	100.0	157	90		750	594	907			0
1042	.3	50.0	91	85							0
1042	.5	14.6	27	26							0
1042	1.2	1.0	0	0							0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

47
 37

STANDARD DEVIATIONS
 .22 .23 .23
 -148 244

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT

157 161
 STANDARD DEVIATIONS
 .06 .04

1.03

0

0

GULF OF GUAYAQUIL CRUISE 6301 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 11 JAN 1963
 TIME 0638- WEATHER CLOUD COVER 9/10 WIND VELOCITY 12KT (6.0 M/SEC) WIND DIR. 25- 35 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 24.6 C AIR TEMP.(WET) 22.9 C AIR TEMP.(DRY) 24.6 C
 RELATIVE HUMIDITY 81 0/0 BAROMETER 760 MM TIDE FLOODING, -1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
1054	0	100.0	68	65		456	316	597								0
1054	.6	50.0	32	23												0
1054	1.5	14.6	10	9												0
1054	3.7	1.0	0	0												0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

54
 45

-570

481

STANDARD DEVIATIONS
 .08 .08 .08

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC NIGHT
 RESP.
 MG/M3

112.53

671

-1.25

-176

STANDARD DEVIATIONS
 .02 .06

GULF OF GUAYAQUIL CRUISE 6302 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 16 JAN 1963
 TIME 0633- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 205-215 T
 SECCHI DISK DEPTH 11.0 M SEA TEMP. 25.8 C AIR TEMP.(WET) 26.2 C AIR TEMP.(DRY) 26.3 C
 RELATIVE HUMIDITY 99 0/0 BAROMETER 762 MM TIDE EBBING 8/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
1066	0	100.0	2	2		83	-319	485			1
1066	10.0	50.0	0	0							1
1066	15.0	14.6	1	0							1
1066	25.0	1.0	1	0							1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

15
7

STANDARD DEVIATIONS
 .07 .11 .11
 -19240 2870

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

402 0 0
 STANDARD DEVIATIONS
 .08 0

GULF OF GUAYAQUIL CRUISE 6302 STATION 7- 0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 19 JAN 1963
 TIME 0631- WEATHER 01 CLOUD COVER 6/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 205-215 T
 SECCHI DISK DEPTH 14.0 M SEA TEMP. 24.9 C AIR TEMP.(WET) 22.9 C AIR TEMP.(DRY) 25.9 C
 RELATIVE HUMIDITY 96 0/0 BAROMETER 759 MM TIDE EBBING 1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
1090	0	100.0	14	13		40	-148	229			1
1090	10.0	50.0	0	0							1
1090	15.0	14.6	4	2							1
1090	25.0	1.0	0	0							1

INTEGRATED HIGH PRODUCTIVITY 50
 INTEGRATED MEAN PRODUCTIVITY 39

STANDARD DEVIATIONS
 .02 .08 .08
 -11470 1724

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

188 0 0
 STANDARD DEVIATIONS
 .08 0

CULF OF GUAYAQUIL CRUISE 6303 STATION V- 0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 23 JAN 1963
 TIME 0633- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH .5 M SEA TEMP. C AIR TEMP. (WET) C AIR TEMP. (DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER -0 MM TIDE FLOODING, -1/10

SAMPLE NUMBER	DEPTH M	O/U INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS PROD MG/M3	E.Z. PROD MG/M2		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3		PROD MG/M2	GROSS PROD MG/M2	
1102	0	100.0	75	65		236	173		298				1
1102	.3	50.0	34	30									1
1102	.5	14.6	6	6									1
1102	1.2	1.0	0	0									1

INTEGRATED HIGH PRODUCTIVITY 18
 INTEGRATED MEAN PRODUCTIVITY 16

STANDARD DEVIATIONS
 .06 .07 .07
 -76 80

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
63	0	0	0	0

STANDARD DEVIATIONS
 .04 0

GULF OF GUAYAQUIL CRUISE 6303 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 24 JAN 1963
 TIME 0620- WEATHER 20 CLOUD COVER 10/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 135-145 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 27.9 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 24.1 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 761 MM TIDE FLOODING, -2/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	
1114	0	100.0	136	131		504	277	731					0	
1114	.5	50.0	92	88									0	
1114	1.2	14.6	28	26									0	
1114	2.5	1.0	0	0									0	

INTEGRATED HIGH PRODUCTIVITY 101
 INTEGRATED MEAN PRODUCTIVITY 96

STANDARD DEVIATIONS
 .13 .13 .13
 -742 393

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
227	-270	-1.19	113.08	826
STANDARD DEVIATIONS				
.05				

GULF OF GUAYAQUIL CRUISE 6303 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 25 JAN 1963
 TIME 0536- WEATHER 51 CLOUD COVER WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 25- 35 T
 SECCHI DISK DEPTH 2.1 M SEA TEMP. 27.0 C AIR TEMP.(WET) 22.0 C AIR TEMP.(DRY) 23.9 C
 RELATIVE HUMIDITY 70 0/0 BAROMETER 761 MM TIDE FLOODING, -1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M2	PROD MG/M3	MG/M2	PROD MG/M3	MG/M2	PROD MG/M2	MG/M2	
1126	0	100.0	49	38			81	35			127			0
1126	1.3	50.0	42	41										0
1126	2.1	14.6	9	9										0
1126	5.0	1.0	-0	-0										0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

77
 51

STANDARD DEVIATIONS
 .07 .08 .08
 -344 144

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
46	258	5.56	0	0

STANDARD DEVIATIONS
 .04 .05

GULF OF GUAYAQUIL CRUISE 6304 STATION V-0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 6 FEB 1963
 TIME 0628- WEATHER CLOUD COVER 9/10 WIND VELOCITY 1KT (.5 M/SEC) WIND DIR. 185-195 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 27.1 C AIR TEMP.(WET) 25.2 C AIR TEMP.(DRY) 25.1 C
 RELATIVE HUMIDITY 99 0/0 BAROMETER 759 MM TIDE FLOODING, -3/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		GROSS PROD MG/M3	E.Z. NET(24)		GROSS PROD MG/M2	SIG
						PROD	MG/M3		PROD	MG/M2		
1138	0	100.0	67	55			130					1
1138	.3	50.0	47	45								1
1138	.5	14.6	5	3								1
1138	1.2	1.0	-1	-1								1

INTEGRATED HIGH PRODUCTIVITY 22
 INTEGRATED MEAN PRODUCTIVITY 17

STANDARD DEVIATIONS
 .05 .11 .11
 -376 85

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

184 -88
 STANDARD DEVIATIONS
 .10 .02

0 0

-.48

GULF OF GUAYAQUIL CRUISE 6304 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 7 FEB 1963
 TIME 0633- WEATHER CLOUD COVER WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 125-135 T
 SECCHI DISK DEPTH .2 M SEA TEMP. 27.2 C AIR TEMP.(WET) 22.5 C AIR TEMP.(DRY) 24.1 C
 RELATIVE HUMIDITY 88 0/0 BAROMETER 762 MM TIDE FLOODING, -2/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	GROSS MG/M2	PROD MG/M2	GROSS MG/M2	
1150	0	100.0	55	46		251	-13			515			1	
1150	.3	50.0	85	67									1	
1150	.5	14.6	21	17									1	
1150	1.2	1.0	3	2									1	

INTEGRATED HIGH PRODUCTIVITY 298
 INTEGRATED MEAN PRODUCTIVITY 240

STANDARD DEVIATIONS
 .21 .23 .23

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

264 164
 STANDARD DEVIATIONS .62
 .08 .11

GULF OF GUAYAQUIL CRUISE 6304 STATION P- 2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 8 FEB 1963
 TIME 0647- WEATHER CLOUD COVER WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 135-145 T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 26.1 C AIR TEMP.(WET) 22.0 C AIR TEMP.(DRY) 24.1 C
 RELATIVE HUMIDITY 76 0/0 BAROMETER 762 MM TIDE FLOODING, -3/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
1162	0	100.0	96	93		342	143	542			1
1162	1.3	50.0	39	20							1
1162	2.5	14.6	21	20							1
1162	5.0	1.0	1	1							1

INTEGRATED HIGH PRODUCTIVITY 132
 INTEGRATED MEAN PRODUCTIVITY 100

STANDARD DEVIATIONS
 .04 .08 .08
 -1409 583

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
199	386	1.94	119.56	648
STANDARD DEVIATIONS				
.07	.05			

GULF OF GUAYAQUIL CRUISE 6305 STATION 7- 0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 13 FEB 1963
 TIME 0703- WEATHER 00 CLOUD COVER 9/10 WIND VELOCITY 1KT (.5 M/SEC) WIND DIR. 305-315 T
 SECCHI DISK DEPTH 15.0 M SEA TEMP. 25.4 C AIR TEMP.(WET) 23.3 C AIR TEMP.(DRY) 25.3 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 762 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
1174	0	100.0	10	7		50	-152	252						1
1174	6.0	50.0	3	3										1
1174	17.0	14.6	1	1										1
1174	32.0	1.0	1	0										1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

64
 47

STANDARD DEVIATIONS
 .05 .08 .08

-13110

2032

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RES.
 MG/M3 MG/M3

202 0 0
 STANDARD DEVIATIONS
 .06 0

GULF OF GUAYAQUIL CRUISE 6305 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 14 FEB 1963
 TIME 0653- WEATHER 02 CLOUD COVER 7-8/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 215-225 T
 SECCHI DISK DEPTH 6.0 M SEA TEMP. 27.4 C AIR TEMP.(WET) 24.0 C AIR TEMP.(DRY) 26.1 C
 RELATIVE HUMIDITY 85 0/0 BAROMETER 744 MM TIDE EBBING 9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS PROD MG/M3	E.Z. NET(24)		GROSS PROD MG/M2	SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3		PROD MG/M2	MG/M2		
1186	0	100.0	16	13		65	31			100				1
1186	2.0	50.0	3	3										1
1186	3.0	14.6	3	2										1
1186	6.0	1.0	-0	-0										1

INTEGRATED HIGH PRODUCTIVITY 19
 INTEGRATED MEAN PRODUCTIVITY 17

STANDARD DEVIATIONS
 .07 .07 .07
 -710 321

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER SFC AMOUNT MG/M3
			C14/02 PER 02 PROD	02 0	
34	0	0	0	0	0
STANDARD DEVIATIONS .02 0					

GULF OF GUAYAQUIL CRUISE 6305 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 15 FEB 1963
 TIME 0623- WEATHER 00 CLOUD COVER 5/10 WIND VELOCITY 1KT (.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 10.0 M SEA TEMP. 25.6 C AIR TEMP.(WET) 24.0 C AIR TEMP.(DRY) 26.1 C
 RELATIVE HUMIDITY 85 0/0 BAROMETER 762 MM TIDE EBBING 7/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M2	PROD MG/M3	MG/M2	PROD MG/M3	MG/M2	PROD MG/M2	GROSS PROD MG/M2	
1198	0	100.0	14	13		21	-87	130					1	
1198	1.5	50.0	3	3									1	
1198	4.0	14.6	1	1									1	
1198	10.0	1.0	1	1									1	

INTEGRATED HIGH PRODUCTIVITY 22
 INTEGRATED MEAN PRODUCTIVITY 20

STANDARD DEVIATIONS
 .02 .07 .07
 -4747 702

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER SFC AMOUNT MG/M3
			C14/02 PER 02 PROD	0	
109	0	0	0	0	0
STANDARD DEVIATIONS .06 0					

GULF OF GUAYAQUIL CRUISE 6306 STATION V-0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 20 FEB 1963
 TIME 0624- WEATHER 02 CLOUD COVER 9/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 85- 95 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 28.2 C AIR TEMP.(WET) 25.3 C AIR TEMP.(DRY) 25.5 C
 RELATIVE HUMIDITY 98 0/0 BAROMETER 762 MM TIDE FLOODING, -7/10

SAMPLE NUMBER	DEPTH M	O/O		HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z.		NET(12) PROD MG/M3	NET(24)		E.Z.		GROSS PROD MG/M2	SIG
		INCUB LIGHT	LIGHT			PROD MG/M2	PROD MG/M2		PROD MG/M3	PROD MG/M2	PROD MG/M2	PROD MG/M2		
1210	0	100.0		88	88			194	-57				444	1
1210	.3	50.0		70	67									1
1210	.5	14.6		25	23									1
1210	1.2	1.0		6	3									1

INTEGRATED HIGH PRODUCTIVITY 40
 INTEGRATED MEAN PRODUCTIVITY 36

STANDARD DEVIATIONS
 .20 .21 .21
 -507 120

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
251	290	1.16	136.63	607
STANDARD DEVIATIONS .03	STANDARD DEVIATIONS .04			

GULF OF GUAYAQUIL CRUISE 6306 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 21 FEB 1963
 TIME 0603- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 175-185 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 27.8 C AIR TEMP.(WET) 23.2 C AIR TEMP.(DRY) 25.1 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 763 MM TIDE FLOODING, -4/10

SAMPLE NUMBER	DEPTH M	O/D INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.	
									NET(24) PROD MG/M2	GROSS PROD MG/M2
1222	0	100.0	139	73		516	294	737		1
1222	.5	50.0	41	37						1
1222	1.2	14.6	24	22						1
1222	2.5	1.0	5	3						1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

77
 59

-711

397

STANDARD DEVIATIONS
 .06 .07 .07

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

.60

222 134
 STANDARD DEVIATIONS
 .05 .07

0

GULF OF GUAYAQUIL CRUISE 6306 STATION P- 2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 22 FEB 1963
 TIME 0608- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 75- 85 T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 26.5 C AIR TEMP.(WET) 23.2 C AIR TEMP.(DRY) 25.1 C
 RELATIVE HUMIDITY 75 0/0 BAROMETER 759 MM TIDE FLOODING, -4/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	GROSS PROD MG/M2	SIG
1234	0	100.0	90	47		59	-216	334			1
1234	1.3	50.0	11	6							1
1234	2.1	14.6	6	6							1
1234	5.0	1.0	0	0							1

INTEGRATED HIGH PRODUCTIVITY 60
 INTEGRATED MEAN PRODUCTIVITY 35

STANDARD DEVIATIONS
 .08 .11 .11
 -2392 360

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED C14/02 PER 02 PROD	MATTER SFC AMOUNT MG/M3	275 STANDARD DEVIATIONS .07
	-22	-.08	0	0	

GULF OF GUAYAQUIL CRUISE 6308 STATION V-2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 13 MAR 1963
 TIME 0648- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 29.2 C AIR TEMP.(WET) 23.5 C AIR TEMP.(DRY) 25.1 C
 RELATIVE HUMIDITY 88 0/0 BAROMETER 761 MM TIDE EBBING 10/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		E.Z. GROSS PROD MG/M2	SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2		
1246	0	100.0	96	89		685		661		709				1	
1246	.3	50.0	114	93										1	
1246	.5	14.6	41	39										1	
1246	1.2	1.0	-0	-0										1	

INTEGRATED HIGH PRODUCTIVITY 467
 INTEGRATED MEAN PRODUCTIVITY 409

STANDARD DEVIATIONS
 .15 .28 .28

131 191

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
24	-90	-3.72	90.80	644

STANDARD DEVIATIONS
 .24 .06

GULF OF GUAYAQUIL CRUISE 6308 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 14 MAR 1963
 TIME 0710- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 1KT (.5 M/SEC) WIND DIR. 205-215 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 28.3 C AIR TEMP.(WET) 24.2 C AIR TEMP.(DRY) 25.4 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 760 MM TIDE EBBING 10/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS PROD MG/M3	E.Z. NET(24)		GROSS PROD MG/M2	SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3		PROD MG/M2	MG/M2		
1258	0	100.0	139	127		756	565	947						1
1258	.3	50.0	87	75										1
1258	.5	14.6	48	48										1
1258	1.2	1.0	-2	-2										1

INTEGRATED HIGH PRODUCTIVITY 77
 INTEGRATED MEAN PRODUCTIVITY 73

STANDARD DEVIATIONS
 .18 .18 .18
 -222 255

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED C14/02 PER 02 PROD	MATTER SFC AMOUNT MG/M3	106.74	1011
191	164	.86				
STANDARD DEVIATIONS .05						

GULF OF GUAYAQUIL CRUISE 6308 STATION P- 2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 15 MAR 1963
 TIME 0637- WEATHER CLOUD COVER 10/10 WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 205-215 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 27.2 C AIR TEMP.(WET) 23.3 C AIR TEMP.(DRY) 24.9 C
 RELATIVE HUMIDITY 76 0/0 BAROMETER 759 MM TIDE EBBING 9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M2	PROD MG/M3	MG/M2	PROD MG/M3	MG/M2	PROD MG/M3	MG/M2	PROD MG/M3	MG/M2	
1270	0	100.0	137	86		839		734		943						1
1270	.6	50.0	24	14												1
1270	1.5	14.6	16	15												1
1270	3.7	1.0	0	0												1

INTEGRATED HIGH PRODUCTIVITY 65
 INTEGRATED MEAN PRODUCTIVITY 50

STANDARD DEVIATIONS
 .23 .25 .25
 -23 761

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

105 366
 STANDARD DEVIATIONS
 .11 .11

3.50

0 0

GULF OF GUAYAQUIL CRUISE 6309 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 20 MAR 1963
 TIME 0643- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY 1KT (.5 M/SEC) WIND DIR. 305-315 T
 SECCHI DISK DEPTH 10.0 M SEA TEMP. 26.7 C AIR TEMP.(WET) 25.6 C AIR TEMP.(DRY) 26.8 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 762 MM TIDE EBBING 1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		GROSS PROD MG/M3	E.Z. NET(24)		GROSS PROD MG/M2	SIG
						PROD	MG/M3		PROD	MG/M2		
1282	0	100.0	8	6				213				1
1282	2.5	50.0	4	2								1
1282	4.5	14.6	7	4								1
1282	8.0	1.0	0	0								1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

26
 16

STANDARD DEVIATIONS
 .08 .09 .09
 -9218 1145

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

207 0 0
 STANDARD DEVIATIONS
 .03 0

GULF OF GUAYAQUIL CRUISE 6309 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 21 MAR 1963
 TIME 0704- WEATHER 25 CLOUD COVER 9/10 WIND VELOCITY 1KT (.5 M/SEC) WIND DIR. 95-105 T
 SECCHI DISK DEPTH 7.0 M SEA TEMP. 25.8 C AIR TEMP.(WET) 23.7 C AIR TEMP.(DRY) 24.6 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 744 MM TIDE EBBING 1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD	MG/M3	PROD	MG/M3	PROD	MG/M3	PROD	MG/M2	PROD	MG/M2	
1294	0	100.0	30	28			60	-106		225						1
1294	2.0	50.0	9	5												1
1294	7.0	14.6	5	3												1
1294	15.0	1.0	0	0												1

INTEGRATED HIGH PRODUCTIVITY 79
 INTEGRATED MEAN PRODUCTIVITY 58

STANDARD DEVIATIONS
 .06 .08 .08
 -4951 849

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

166 0 0 363
 STANDARD DEVIATIONS
 .05

GULF OF GUAYAQUIL CRUISE 6309 STATION 7- 0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 22 MAR 1963
 TIME 0633- WEATHER 01 CLOUD COVER 6/10 WIND VELOCITY 1KT (.5 M/SEC) WIND DIR. 315-325 T
 SECCHI DISK DEPTH 11.0 M SEA TEMP. 27.8 C AIR TEMP.(WET) 23.5 C AIR TEMP.(DRY) 25.8 C
 RELATIVE HUMIDITY 81 0/0 BAROMETER 761 MM TIDE FLOODING, -9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	NET(24) PROD MG/M2	GROSS PROD MG/M2	
1306	0	100.0	9	7		35	-137			206				1
1306	2.0	50.0	1	1										1
1306	4.5	14.6	1	1										1
1306	22.0	1.0	0	0										1

INTEGRATED HIGH PRODUCTIVITY 15
 INTEGRATED MEAN PRODUCTIVITY 13

STANDARD DEVIATIONS
 .05 .07 .07
 -8214 1220

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER SFC AMOUNT MG/M3
			C14/02 PER 02 PROD	0	
172	0	0	0	0	
STANDARD DEVIATIONS					
.04	0				

GULF OF GUAYAQUIL CRUISE 6310 STATION V- 2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 27 MAR 1963
 TIME 0647- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 28.5 C AIR TEMP.(WET) 22.7 C AIR TEMP.(DRY) 24.7 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 759 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	NET(24) PROD MG/M2	GROSS PROD MG/M2	
1318	0	100.0	179	161			348	40			656			1
1318	.3	50.0	142	142										1
1318	.5	14.6	44	23										1
1318	1.2	1.0	0	0										1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

66
 57

-594

177

STANDARD DEVIATIONS
 .48 .49 .49

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC NIGHT
 RESP.
 MG/M3

.38

308 117
 STANDARD DEVIATIONS
 .07 .10

0 0

GULF OF GUAYAQUIL CRUISE 6310 STATION F- 0 LAT. 02 44.3 S LONG. 79 54.0 W DATE 27 MAR 1963
 TIME 1620- WEATHER 03 CLOUD COVER 9/10 WIND VELOCITY 1KT (.5 M/SEC) WIND DIR. 125-135 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 29.1 C AIR TEMP.(WET) 25.4 C AIR TEMP.(DRY) 31.0 C
 RELATIVE HUMIDITY 64 0/0 BAROMETER 758 MM TIDE EBBING 6/10

SAMPLE NUMBER	DEPTH M	O/O		HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z.		NET(12)		NET(24)		GROSS		E.Z.		GROSS		SIG
		INCUB	LIGHT			PROD	MG/M2	PROD	MG/M3	PROD	MG/M2	PROD	MG/M3	PROD	MG/M2	PROD	MG/M2	
1330	0	100.0		160	137				1680		1508		1852					1
1330	.3	50.0		65	54													1
1330	.5	14.6		9	7													1
1330	1.2	1.0		0	0													1

INTEGRATED HIGH PRODUCTIVITY 35
 INTEGRATED MEAN PRODUCTIVITY 29

STANDARD DEVIATIONS
 .11 .12 .12

67 498

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC NIGHT
 RESP.
 MG/M3

0 0

1.41

243

STANDARD DEVIATIONS
 .06 .19

GULF OF GUAYAQUIL CRUISE 6310 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 29 MAR 1963
 TIME 0640- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 45- 55 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 24.5 C AIR TEMP.(WET) 23.7 C AIR TEMP.(DRY) 25.0 C
 RELATIVE HUMIDITY 78 0/0 BAROMETER 761 MM TIDE EBBING 10/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
1342	0	100.0	65	58		76	-205	357			1
1342	5.0	50.0	53	34							1
1342	1.2	14.6	12	12							1
1342	2.5	1.0	0	0							1

INTEGRATED HIGH PRODUCTIVITY 191
 INTEGRATED MEAN PRODUCTIVITY 147

STANDARD DEVIATIONS
 .06 .11 .11
 -1215 192

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

281 186
 STANDARD DEVIATIONS .66
 .09 .12

GULF OF GUAYAQUIL CRUISE 6311 STATION V- 0 LAT. 02 34.0 S LONG. 80 06.5 W DATE 17 APR 1963
 TIME 1023- WEATHER 01 CLOUD COVER 4/10 WIND VELOCITY 1KT (.5 M/SEC) WIND DIR. 355- 5 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 28.3 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 761 MM TIDE EBBING 9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12).NET(24)		GROSS PROD MG/M3	E.Z. NET(24)		GROSS PROD MG/M2	SIG
						PROD MG/M3	PROD MG/M3		PROD MG/M2	PROD MG/M2		
1354	0	100.0	128	105		471	444	498				1
1354	.3	50.0	36	18								1
1354	.5	14.6	38	21								1
1354	1.2	1.0	0	0								1

INTEGRATED HIGH PRODUCTIVITY 172
 INTEGRATED MEAN PRODUCTIVITY 94

STANDARD DEVIATIONS
 .11 .27 .27

66 134

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC NIGHT
 RESP.
 MG/M3

0 0

0

STANDARD DEVIATIONS
 .25

GULF OF GUAYAQUIL CRUISE 6311 STATION F-0 LAT. 02 44.3 S LONG. 79 54.0 W DATE 18 APR 1963
 TIME 0801- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 5- 15 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 27.2 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM TIDE EBBING 2/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
1366	0	100.0	96	48		2051	4217	-116								1
1366	.5	50.0	138	112												1
1366	1.2	14.6	38	23												1
1366	2.5	1.0	0	0												1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

300
 206

STANDARD DEVIATIONS
 .06 .07 .07
 10771 -62

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

-2167 0 0 0
 STANDARD DEVIATIONS
 .05 0

GULF OF GUAYAQUIL CRUISE 6311 STATION P- 0 LAT. 03 08.6 S LONG. 80 04.0 W DATE 19 APR 1963
 TIME 0852- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 135-145 T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 26.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM TIDE EBBING 3/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD	MG/M3	PROD	MG/M3	PROD	MG/M3	PROD	MG/M2	PROD	MG/M2	
1378	0	100.0	96	71			172		-59		402					1
1378	1.2	50.0	109	52												1
1378	2.1	14.6	65	63												1
1378	5.0	1.0	0	0												1

INTEGRATED HIGH PRODUCTIVITY 199
 INTEGRATED MEAN PRODUCTIVITY 173
 STANDARD DEVIATIONS
 .23 .24 .24
 -1872 433

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER	
			C14/02 PER 02 PROD	C14/02 SFC AMOUNT MG/M3		
230	0	0	0	0		
STANDARD DEVIATIONS	0					
.03						

GULF OF GUAYAQUIL CRUISE 6312 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 1 MAY 1963
 TIME 0640- WEATHER 01 CLOUD COVER 6/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH 5.0 M SEA TEMP. 25.8 C AIR TEMP.(WET) 24.9 C AIR TEMP.(DRY) 25.0 C
 RELATIVE HUMIDITY 99 0/0 BAROMETER 749 MM TIDE EBBING 3/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M2	PROD MG/M3	MG/M2	PROD MG/M3	MG/M2	NET(24) PROD MG/M2	GROSS PROD MG/M2	
1390	0	100.0	63	48		259	215	304					1	
1390	1.0	50.0	5	4									1	
1390	2.0	14.6	10	10									1	
1390	4.0	1.0	0	0									1	

INTEGRATED HIGH PRODUCTIVITY 35
 INTEGRATED MEAN PRODUCTIVITY 30

STANDARD DEVIATIONS
 .03 .05 .05
 -299 818

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

45 0 0
 STANDARD DEVIATIONS
 .04 0

GULF OF GUAYAQUIL CRUISE 6312 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 2 MAY 1963
 TIME 0647- WEATHER 01 CLOUD COVER 6/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH 8.0 M SEA TEMP. 24.9 C AIR TEMP.(WET) 22.1 C AIR TEMP.(DRY) 23.9 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 754 MM TIDE EBBING 1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	GROSS MG/M3	NET(24) PROD MG/M2	GROSS PROD MG/M2	
1402	0	100.0	32	32		50	-66		166				1	
1402	4.0	50.0	23	18									1	
1402	8.0	14.6	2	2									1	
1402	20.0	1.0	0	0									1	

INTEGRATED HIGH PRODUCTIVITY 155
 INTEGRATED MEAN PRODUCTIVITY 134

STANDARD DEVIATIONS
 .05 .05 .05
 -3930 715

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED C14/02 PER 02 PROD	MATTER SFC AMOUNT MG/M3
STANDARD DEVIATIONS 0				

GULF OF GUAYAQUIL CRUISE 6312 STATION 7- 0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 4 MAY 1963
 TIME 0635- WEATHER 01 CLOUD COVER 6/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH 9.0 M SEA TEMP. 25.1 C AIR TEMP.(WET) 21.8 C AIR TEMP.(DRY) 22.6 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 749 MM TIDE FLOODING,-10/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		GROSS PROD MG/M3	E.Z. NET(24)		GROSS PROD MG/M2	SIG
						PROD	MG/M3		PROD	MG/M2		
1414	0	100.0	16	13		41	-72	153				1
1414	2.0	50.0	8	8								1
1414	4.0	14.6	6	3								1
1414	14.0	1.0	0	0								1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

49
 39

STANDARD DEVIATIONS
 .06 .07 .07
 -4306 739

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

112 0 0 0
 STANDARD DEVIATIONS
 .04 0

GULF OF GUAYAQUIL CRUISE 6313 STATION V-2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 8 MAY 1963
 TIME 0627- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 27.4 C AIR TEMP.(WET) 22.0 C AIR TEMP.(DRY) 24.2 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 762 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
1426	0	100.0	121	97		357	174	540			1
1426	.3	50.0	47	47							1
1426	.5	14.6	4	4							1
1426	1.2	1.0	1	1							1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

26
23

STANDARD DEVIATIONS
 .10 .13 .13
 -313 145

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC NIGHT
 RESP.
 MG/M3

1.39

255

183

STANDARD DEVIATIONS
 .08 .07

GULF OF GUAYAQUIL CRUISE 6313 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 9 MAY 1963
 TIME 0656- WEATHER 01 CLOUD COVER 10/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 26.3 C AIR TEMP.(WET) 22.7 C AIR TEMP.(DRY) 24.0 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 762 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	NET(24) PROD MG/M2	GROSS PROD MG/M2	
1438	0	100.0	120	87		550	437			663			1	
1438	.3	50.0	54	27									1	
1438	.5	14.6	16	15									1	
1438	1.2	1.0	1	1									1	

INTEGRATED HIGH PRODUCTIVITY 32
 INTEGRATED MEAN PRODUCTIVITY 21

STANDARD DEVIATIONS
 .16 .16 .16
 -104 178

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

113 116 0 0
 STANDARD DEVIATIONS 1.02
 .04 .05

GULF OF GUAYAQUIL CRUISE 6313 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 10 MAY 1963
 TIME 0613- WEATHER 01 CLOUD COVER 6/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 305-315 T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 25.4 C AIR TEMP. (WET) 22.8 C AIR TEMP. (DRY) 24.4 C
 RELATIVE HUMIDITY 88 0/0 BAROMETER 762 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
1450	0	100.0	205	179			737	549			926					1
1450	1.3	50.0	43	40												1
1450	2.1	14.6	19	16												1
1450	5.0	1.0	1	1												1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

169
 151

-889

996

STANDARD DEVIATIONS
 .25 .26 .26

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC DAY SFC NIGHT
 RESP.
 MG/M3

.71

134

188

STANDARD DEVIATIONS
 .06 .06

GULF OF GUAYAQUIL CRUISE 6314 STATION V- 2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 21 MAY 1963
 TIME 0646- WEATHER CLOUD COVER 10/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 295-305 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 26.9 C AIR TEMP.(WET) 21.7 C AIR TEMP.(DRY) 23.5 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 761 MM TIDE FLOODING, -4/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
1462	0	100.0	298	255		267	210	324								1
1462	.5	50.0	332	319												1
1462	1.2	14.6	28	27												1
1462	2.5	1.0	0	0												1

INTEGRATED HIGH PRODUCTIVITY 723
 INTEGRATED MEAN PRODUCTIVITY 663

STANDARD DEVIATIONS
 .03 .06 .06
 -111 174

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

57 -182 -3.19
 STANDARD DEVIATIONS
 .05 .04

GULF OF GUAYAQUIL CRUISE 6314 STATION F-2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 22 MAY 1963
 TIME 0653- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY 6KT f 3.0 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 26.4 C AIR TEMP.(WET) 21.3 C AIR TEMP.(DRY) 23.1 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 760 MM TIDE FLOODING, -3/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z.		NET(12)		NET(24)		GROSS		E.Z.		SIG
					PROD MG/M2	MG/M3	PROD MG/M2	MG/M3	PROD MG/M2	MG/M3	PROD MG/M2	MG/M3	PROD MG/M2	MG/M3	
1474	0	100.0	526	526			3387	5443			1332				0
1474	.3	50.0	349	349											0
1474	.5	14.6	88	83											0
1474	1.2	1.0	2	1											0

INTEGRATED HIGH PRODUCTIVITY 172
 INTEGRATED MEAN PRODUCTIVITY 168

STANDARD DEVIATIONS
 .24 .24 .24

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER SFC AMOUNT MG/M3
			C14/02 PER 02 PROD	-93.90	
-2056	168	-.08		-1250	
STANDARD DEVIATIONS .03					

GULF OF GUAYAQUIL CRUISE 6314 STATION P- 2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 23 MAY 1963
 TIME 0525- WEATHER CLOUD COVER WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 115-125 T
 SECCHI DISK DEPTH 2.1 M SEA TEMP. 25.1 C AIR TEMP.(WET) 21.5 C AIR TEMP.(DRY) 23.7 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 759 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	NET(24) PROD MG/M2	GROSS PROD MG/M2	
1486	0	100.0	312	264		635	489	781					0	
1486	1.3	50.0	182	153									0	
1486	2.1	14.6	45	40									0	
1486	5.0	1.0	16	10									0	

INTEGRATED HIGH PRODUCTIVITY 465
 INTEGRATED MEAN PRODUCTIVITY 390

STANDARD DEVIATIONS
 .09 .09 .09
 -647 882

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

146 106
 STANDARD DEVIATIONS .73
 .02 .02

GULF OF GUAYAQUIL CRUISE 6315 STATION 3-0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 29 MAY 1963
 TIME 0643- WEATHER CLOUD COVER WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 305-315 T
 SECCHI DISK DEPTH 9.0 M SEA TEMP. 24.8 C AIR TEMP.(WET) 21.8 C AIR TEMP.(DRY) 24.8 C
 RELATIVE HUMIDITY 77 0/0 BAROMETER 759 MM TIDE EBBING 6/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.	
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	GROSS PROD MG/M2
1498	0	100.0	25	20		290	215	366					1
1498	2.5	50.0	2	1									1
1498	4.5	14.6	3	3									1
1498	21.0	1.0	-0	-0									1

INTEGRATED HIGH PRODUCTIVITY 24
 INTEGRATED MEAN PRODUCTIVITY 19

STANDARD DEVIATIONS
 .05 .05 .05
 -1626 1771

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER SFC AMOUNT MG/M3
			C14/02 PER 02 PROD	0	
15	0	0	0	0	0

STANDARD DEVIATIONS
 .02

GULF OF GUAYAQUIL CRUISE 6315 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 30 MAY 1963
 TIME 0633- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH 4.0 M SEA TEMP. 23.2 C AIR TEMP.(WET) 21.0 C AIR TEMP.(DRY) 22.5 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 749 MM TIDE EBBING 3/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
1510	0	100.0	126	107		518	338	697			1
1510	2.0	50.0	1	1							1
1510	3.0	14.6	20	20							1
1510	10.0	1.0	0	0							1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

98
 85

STANDARD DEVIATIONS
 .06 .10 .10
 -2090 1501

SECRETED MATTER
 C14/O2 SFC
 PER O2 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

180 0 0 0

STANDARD DEVIATIONS
 .08 0

GULF OF GUAYAQUIL CRUISE 6315 STATION 7- 0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 31 MAY 1963
 TIME 0647- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH 9.0 M SEA TEMP. 21.8 C AIR TEMP.(WET) 20.0 C AIR TEMP.(DRY) 21.2 C
 RELATIVE HUMIDITY 91 0/0 BAROMETER 759 MM TIDE EBBING 2/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	E.Z. GROSS PROD MG/M2	SIG
1522	0	100.0	39	34		79	31	127			1
1522	1.0	50.0	26	23							1
1522	4.0	14.6	9	7							1
1522	9.0	1.0	1	1							1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

98
 85

STANDARD DEVIATIONS
 .02 .04 .04
 -1554 617

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3
 48 0 0
 STANDARD DEVIATIONS
 .04 0 0

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3
 0 0 0

GULF OF GUAYAQUIL CRUISE 6316 STATION V- 2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 5 JUN 1963
 TIME 0703- WEATHER 10/10 WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 265-275 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 25.9 C AIR TEMP.(WET) 20.8 C AIR TEMP.(DRY) 22.7 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 761 MM TIDE FLOODING, -3/10

SAMPLE NUMBER	DEPTH M	O/O INCUR LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD	MG/M3	PROD	MG/M3	PROD	MG/M3	PROD	MG/M2	PROD	MG/M2	
1534	0	100.0	-0	-0		159		-155		474						1
1534	.5	50.0	-0	-0												1
1534	1.2	14.6	-0	-0												1
1534	2.5	1.0	0	0												1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

0
 0
 STANDARD DEVIATIONS
 .06 .10 .10
 -1317 255

SECRETED
 C14/02
 PER 02
 PROD

MATTER
 SFC
 AMOUNT
 MG/M3

SFC DAY
 RESP.
 MG/M3

SFC NIGHT
 RESP.
 MG/M3

DAY/NIGHT

314
 STANDARD DEVIATIONS
 .08 .05 .08

24
 .08

GULF OF GUAYAQUIL CRUISE 6316 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 6 JUN 1963
 TIME 0707- WEATHER CLOUD COVER 10/10 WIND VELOCITY SKT (2.5 M/SEC) WIND DIR. 205-215 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 25.5 C AIR TEMP.(WET) 20.7 C AIR TEMP.(DRY) 22.3 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 760 MM TIDE FLOODING, -2/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
1546	0	100.0	-0	-0		620	465	775					1	
1546	.6	50.0	-0	-0									1	
1546	1.5	14.6	-0	-0									1	
1546	3.7	1.0	-0	-0									1	

INTEGRATED HIGH PRODUCTIVITY 0
 INTEGRATED MEAN PRODUCTIVITY 0

STANDARD DEVIATIONS
 .08 .09 .09
 -540 626

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. MG/M3
 155 15 .10
 STANDARD DEVIATIONS .03

GULF OF GUAYAQUIL CRUISE 6316 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 7 JUN 1963
 TIME 0642- WEATHER CLOUD COVER 10/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 245-255 I
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 24.8 C AIR TEMP.(WET) 21.1 C AIR TEMP.(DRY) 23.1 C
 RELATIVE HUMIDITY 81 0/0 BAROMETER 761 MM TIDE FLOODING, -2/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		E.Z. NET(24)		E.Z. GROSS PROD		SIG
						PROD MG/M3	MG/M2	PROD MG/M3	MG/M2	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
1558	0	100.0	-0	-0		467	334	600					1	
1558	1.3	50.0	-0	-0									1	
1558	2.1	14.6	-0	-0									1	
1558	5.0	1.0	0	0									1	

INTEGRATED HIGH PRODUCTIVITY 0
 INTEGRATED MEAN PRODUCTIVITY 0

STANDARD DEVIATIONS
 .11 .11 .11
 -681 645

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER SFC AMOUNT MG/M3
			CL4/02 PER 02 PROD	122.12	
133	165	1.24		732	
STANDARD DEVIATIONS .03					

GULF OF GUAYAQUIL CRUISE 6317 STATION V-2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 19 JUN 1963
 TIME 0637- WEATHER CLOUD COVER 10/10 WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 24.9 C AIR TEMP.(WET) 20.6 C AIR TEMP.(DRY) 22.7 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 761 MM TIDE FLOODING, -5/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		E.Z. GROSS PROD MG/M2	SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2		
1570	0	100.0	83	81		73	-207				353				1
1570	.5	50.0	67	65											1
1570	1.2	14.6	14	14											1
1570	2.5	1.0	0	0											1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

64
62

190

-1210

STANDARD DEVIATIONS
 .07 .09 .09

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC NIGHT
 RESP.
 MG/M3

156.48 553

.07

18

STANDARD DEVIATIONS
 .05 .02

GULF OF GUAYAQUIL CRUISE 6317 STATION F-2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 20 JUN 1963
 TIME 0645- WEATHER 10/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 24.7 C AIR TEMP.(WET) 20.8 C AIR TEMP.(DRY) 22.0 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 761 MM TIDE FLOODING, -3/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS PROD MG/M2	SLO
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2		
1582	0	100.0	170	154		987	868	1105						0	
1582	.5	50.0	102	93										0	
1582	1.2	14.6	15	13										0	
1582	2.5	1.0	-1	-1										0	

INTEGRATED HIGH PRODUCTIVITY 104
 INTEGRATED MEAN PRODUCTIVITY 94

STANDARD DEVIATIONS
 .09 .11 .11

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

119 18
 STANDARD DEVIATIONS .15
 .05 .02

GULF OF GUAYAQUIL CRUISE 6317 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 21 JUN 1963
 TIME 0649- WEATHER 50 CLOUD COVER 10/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 125-135 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 23.1 C AIR TEMP.(WET) 20.3 C AIR TEMP.(DRY) 21.2 C
 RELATIVE HUMIDITY 80.0/0 BAROMETER 760 MM TIDE FLOODING, -3/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	E.Z.		SIG
								NET(24) PROD MG/M2	GROSS PROD MG/M2	
1594	0	100.0	61	55		89	-131		308	0
1594	.6	50.0	9	8						0
1594	1.5	14.6	11	11						0
1594	3.7	1.0	2	1						0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

38
34

STANDARD DEVIATIONS
 .07 .08
 -1396 249

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

219 90
 STANDARD DEVIATIONS
 .05 .06
 .41

GULF OF GUAYAQUIL CRUISE 6318 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 26 JUN 1963
 TIME 0633- WEATHER 01 CLOUD COVER 10/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 315-325 T
 SECCHI DISK DEPTH 3.0 M SEA TEMP. 23.5 C AIR TEMP.(WET) 20.0 C AIR TEMP.(DRY) 21.8 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 759 MM TIDE EBBING 9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	NET(24) PROD MG/M2	GROSS PROD MG/M2		
1606	0	100.0	76	58		614	493		735					1
1606	1.5	50.0	1	-1										1
1606	3.0	14.6	11	9										1
1606	6.0	1.0	0	0										1

INTEGRATED HIGH PRODUCTIVITY 37
 INTEGRATED MEAN PRODUCTIVITY 28

STANDARD DEVIATIONS
 .09 .10 .10
 -630 1186

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

121 0 0 0
 STANDARD DEVIATIONS
 .04 0

GULF OF GUAYAQUIL CRUISE 6318 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 27 JUN 1963
 TIME 0643- WEATHER 01 CLOUD COVER 10/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 175-185 T
 SECCHI DISK DEPTH 4.0 M SEA TEMP. 21.7 C AIR TEMP.(WET) 18.9 C AIR TEMP.(DRY) 21.2 C
 RELATIVE HUMIDITY 79 0/0 BAROMETER 757 MM TIDE EBBING 8/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
1618	0	100.0	80	51		855	704	1007			1
1618	1.5	50.0	70	70							1
1618	5.0	14.6	14	12							1
1618	10.0	1.0	0	0							1

INTEGRATED HIGH PRODUCTIVITY 250
 INTEGRATED MEAN PRODUCTIVITY 169

STANDARD DEVIATIONS
 .15 .17 .17
 -862 2167

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
151	0	0	0	0

STANDARD DEVIATIONS
 .08 0

GULF OF GUAYAQUIL CRUISE 6318 STATION 7- 0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 28 JUN 1963
 TIME 0715- WEATHER 03 CLOUD COVER 9/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 215-225 T
 SECCHI DISK DEPTH 7.0 M SEA TEMP. 19.9 C AIR TEMP.(WET) 17.9 C AIR TEMP.(DRY) 19.9 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 759 MM TIDE EBBING 8/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
1630	0	100.0	80	71		711	592	830			1
1630	2.5	50.0	23	22							1
1630	8.0	14.6	7	7							1
1630	20.0	1.0	0	0							1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

214
 196

-1034

3125

STANDARD DEVIATIONS
 .18 .20 .20

SECRETED MATTER
 C14/O2 SFC
 PER O2 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

119 0
 STANDARD DEVIATIONS
 .08 0

0 0

GULF OF GUAYAQUIL CRUISE 6319 STATION V- 2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 3 JUL 1963
 TIME 0633- WEATHER CLOUD COVER 10/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 185-195 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 24.6 C AIR TEMP.(WET) 19.8 C AIR TEMP.(DRY) 21.2 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 761 MM TIDE FLOODING, -5/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	E.Z. GROSS PROD MG/M2	STN
1642	0	100.0	46	39		62	-184	308			0
1642	.5	50.0	22	21							0
1642	1.2	14.6	11	11							0
1642	2.5	1.0	-0	-0							0

INTEGRATED HIGH PRODUCTIVITY 32
 INTEGRATED MEAN PRODUCTIVITY 29

STANDARD DEVIATIONS
 .04 .08 .08
 -1065 166

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED C14/02 PER 02 PROD	MATTER SFC AMOUNT MG/M3
246	22	.09	0	0

STANDARD DEVIATIONS
 .06 .06

GULF OF GUAYAQUIL CRUISE 6319 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 4 JUL 1963
 TIME 0654- WEATHER CLOUD COVER 10/10 WIND VELOCITY 1KT (.5 M/SEC) WIND DIR. 115-125 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 24.6 C AIR TEMP.(WET) 20.2 C AIR TEMP.(DRY) 22.1 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 761 MM TIDE FLOODING, -5/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS PROD MG/M3	E.Z. PROD MG/M2		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3		PROD MG/M2	GROSS PROD MG/M2	
1654	0	100.0	83	74		307	200		413			0	
1654	.5	50.0	64	62								0	
1654	1.2	14.6	6	6								0	
1654	2.5	1.0	-0	-0								0	

INTEGRATED HIGH PRODUCTIVITY 56
 INTEGRATED MEAN PRODUCTIVITY 53

STANDARD DEVIATIONS
 .04 .04 .04
 -311 222

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

107 46
 STANDARD DEVIATIONS
 .02 .04

.44

0

0

GULF OF GUAYAQUIL CRUISE 6319 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 5 JUL 1963
 TIME 0702- WEATHER 10/10 WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 285-295 T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 23.8 C AIR TEMP.(WET) 20.8 C AIR TEMP.(DRY) 22.2 C
 RELATIVE HUMIDITY 77 0/0 BAROMETER 761 MM TIDE FLOODING, -5/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z.		NET(12)		NET(24)		GROSS		E.Z.		SIG
					PROD MG/M2	PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M2	PROD MG/M2	PROD MG/M2	PROD MG/M2	
1666	0	100.0	143	112			587	503			670				0
1666	1.2	50.0	51	50											0
1666	2.1	14.6	8	7											0
1666	5.0	1.0	-0	-0											0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

129
 113
 STANDARD DEVIATIONS
 .08 .11 .11
 -114 -114 721

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
84	86	1.03	0	0

STANDARD DEVIATIONS
 .07 .03

GULF OF GUAYAQUIL CRUISE 6320 STATION V- 2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 15 JUL 1963
 TIME 0642- WEATHER 10/10 WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 24.3 C AIR TEMP.(WET) 20.6 C AIR TEMP.(DRY) 21.7 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 761 MM TIDE EBBING 0/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	E.Z. GROSS PROD MG/M2	SIC
1678	0	100.0	94	86		441	359	524			0
1678	.3	50.0	67	63							0
1678	.5	14.6	11	10							0
1678	1.2	1.0	0	0							0

INTEGRATED HIGH PRODUCTIVITY 29
 INTEGRATED MEAN PRODUCTIVITY 27

STANDARD DEVIATIONS
 .07 .08 .08
 -66 141

SFC DAY SFC NIGHT DAY/NIGHT SECRETED MATTER
 RESP. RESP. SFC
 MG/M3 MG/M3 MG/M3 PER 02 AMOUNT
 PROD MG/M3

83 45
 STANDARD DEVIATIONS
 .04 .03

99.37 521

.54

GULF OF GUAYAQUIL CRUISE 6320 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 16 JUL 1963
 TIME 0700- WEATHER 10/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 165-175 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 24.1 C AIR TEMP.(WET) 20.3 C AIR TEMP.(DRY) 22.3 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 762 MM TIDE EBBING 0/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		E.Z. GROSS PROD MG/M2	SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2		
1690	0	100.0	67	63		322	203	442						0	
1690	.3	50.0	36	35										0	
1690	.5	14.6	9	8										0	
1690	1.2	1.0	1	0										0	

INTEGRATED HIGH PRODUCTIVITY 20
 INTEGRATED MEAN PRODUCTIVITY 19

STANDARD DEVIATIONS
 .02 .05 .05

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

119 118 498

.99

119

STANDARD DEVIATIONS
 .04 .05

GULF OF GUAYAQUIL CRUISE 6320 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 17 JUL 1963
 TIME 0703-0708 WEATHER CLOUD COVER 10/10 WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 23.6 C AIR TEMP.(WET) 20.2 C AIR TEMP.(DRY) 22.0 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 763 MM TIDE EBBING 0/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS PROD MG/M3	E.Z. NET(24)		GROSS PROD MG/M2	SIB
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M2		PROD MG/M2	MG/M2		
1702	0	100.0	104	91		536	453	619					0	
1702	1.2	50.0	53	52									0	
1702	2.1	14.6	13	13									0	
1702	5.0	1.0	-0	-0									0	

INTEGRATED HIGH PRODUCTIVITY 118
 INTEGRATED MEAN PRODUCTIVITY 111

STANDARD DEVIATIONS
 .06 .06 .06
 -164 667

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

83 171 2.06 0
 STANDARD DEVIATIONS
 .02 .03

GULF OF GUAYAQUIL CRUISE 6321 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 31 JUL 1963
 TIME 0717- WEATHER 01 CLOUD COVER 10/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 6.0 M SEA TEMP. 22.5 C AIR TEMP.(WET) 19.4 C AIR TEMP.(DRY) 21.5 C
 RELATIVE HUMIDITY 83.0/0 BAROMETER 763 MM TIDE EBBING 1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
1714	0	100.0	17	14		26	-86		139							0
1714	2.5	50.0	14	13												0
1714	6.5	14.6	3	3												0
1714	15.0	1.0	0	0												0

INTEGRATED HIGH PRODUCTIVITY 76
 INTEGRATED MEAN PRODUCTIVITY 68

STANDARD DEVIATIONS
 .04 .06 .06
 -2916 447

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER SFC AMOUNT MG/M3
			C14/02 PER 02 PROD	02	
112	0	0	0	0	0

STANDARD DEVIATIONS
 .04

GULF OF GUAYAQUIL CRUISE 6321 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 1 AUG 1963
 TIME 0708- WEATHER CLOUD COVER 10/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH 9.0 M SEA TEMP. 23.0 C AIR TEMP.(WET) 20.1 C AIR TEMP.(DRY) 21.7 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 763 MM TIDE EBBING 0/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
1726	0	100.0	19	18		68	-34		170							0
1726	3.0	50.0	7	6												0
1726	9.0	14.6	6	6												0
1726	22.5	1.0	-0	-0												0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

79
71

STANDARD DEVIATIONS
 .05 .05 .05
 -3779 824

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PRUD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

102 0 0 254
 STANDARD DEVIATIONS
 .02 0

GULF OF GUAYAQUIL CRUISE 6321 STATION 7- 0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 3 AUG 1963
 TIME 0650- WEATHER 01 CLOUD COVER 5/10 WIND VELOCITY 12KT (6.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 10.0 M SEA TEMP. 22.6 C AIR TEMP.(WET) 20.6 C AIR TEMP.(DRY) 22.7 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 762 MM TIDE FLOODING, -8/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
1738	0	100.0	18	15		39	-60	139			0
1738	4.0	50.0	3	3							0
1738	10.0	14.6	4	4							0
1738	25.0	1.0	0	0							0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

45
 40
 -4232
 748
 STANDARD DEVIATIONS
 .06 .06 .06

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
100	0	0	0	0
STANDARD DEVIATIONS				
.03	0			

GULF OF GUAYAQUIL CRUISE 6322 STATION V-2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 7 AUG 1963
 TIME 0659- WEATHER CLOUD COVER 10/10 WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 24.3 C AIR TEMP.(WET) 20.0 C AIR TEMP.(DRY) 22.0 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 762 MM

SAMPLE NUMBER	DEPIH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.L. PROD MG/M2	NET(12)		NET(24)		GROSS		E.L. NET(24)		GROSS		SIG
						PROD	MG/M3	PROD	MG/M3	PROD	MG/M3	PROD	MG/M2	PROD	MG/M2	
1750	0	100.0	93	88				417	298		535					0
1750	.3	50.0	62	61												0
1750	.5	14.6	25	21												0
1750	1.2	1.0	0	0												0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

33
 31

STANDARD DEVIATIONS
 .21 .21 .21
 -152 144

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

118 302
 STANDARD DEVIATIONS
 .01 .03
 105.65 565
 2.55

GULF OF GUAYAQUIL CRUISE 6322 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 8 AUG 1963
 TIME 0616- WEATHER CLOUD COVER WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 205-215 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 24.5 C AIR TEMP.(WET) 19.8 C AIR TEMP.(DRY) 21.7 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 762 MM TIDE EBBING 9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.	
									NET(24) PROD MG/M2	GROSS PROD MG/M2
1762	0	100.0	59	59		294	-1135	1723		
1762	.3	50.0	45	40						
1762	.5	14.6	8	7						
1762	1.2	1.0	0	-0						

INTEGRATED HIGH PRODUCTIVITY 20 1
 INTEGRATED MEAN PRODUCTIVITY 22 1

STANDARD DEVIATIONS
 .10 .10 .10
 -3110 464

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

179.51 3094

.05

1429 71
 STANDARD DEVIATIONS
 .01 .04

GULF OF GUAYAQUIL CRUISE 6322 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 9 AUG 1963
 TIME 0633- WEATHER 10/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 23.2 C AIR TEMP.(WET) 21.7 C AIR TEMP.(DRY) 23.0 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 762 MM TIDE EBBING 10/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD	MG/M3	PROD	MG/M3	PROD	MG/M3	NET(24)	GROSS PROD MG/M2	
1774	0	100.0	68	68		257		-1934		2447				0
1774	.5	50.0	26	21										0
1774	1.2	14.6	28	26										0
1774	2.5	1.0	0	-0										0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

65
 63
 STANDARD DEVIATIONS
 .04 .04 .04
 -9636 1317

SFC DAY	SFC NIGHT	DAY/NIGHT	SECRETED	MATTER
RESP. MG/M3	RESP. MG/M3		C14/O2 PER O2 PROD	SFC AMOUNT MG/M3
2190	-2317	-1.06	186.73	4570
STANDARD DEVIATIONS .02				

GULF OF GUAYAQUIL CRUISE 6323 STATION V-2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 28 AUG 1963
 TIME 0642- WEATHER CLOUD COVER 6/10 WIND VELOCITY 9KT (4.5 M/SEC) WIND DIR. 295-305 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 24.9 C AIR TEMP.(WET) 19.8 C AIR TEMP.(DRY) 21.7 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 761 MM TIDE EBBING 1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M2	PROD MG/M2	PROD MG/M2	PROD MG/M2			
1786	0	100.0	70	54		409	378	439								0
1786	.5	50.0	38	28												0
1786	1.2	14.6	21	20												0
1786	2.5	1.0	0	-0												0

INTEGRATED HIGH PRODUCTIVITY 52
 INTEGRATED MEAN PRODUCTIVITY 44

STANDARD DEVIATIONS
 .09 .09 .09

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

30 0 0
 STANDARD DEVIATIONS
 .01 0

GULF OF GUAYAQUIL CRUISE 6323 STATION F-1 LAT. 02 44.3 S LONG. 79 54.0 W DATE 28 AUG 1963
 TIME 1510- WEATHER 02 CLOUD COVER 2-3/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 26.8 C AIR TEMP.(WET) 24.2 C AIR TEMP.(DRY) 31.0 C
 RELATIVE HUMIDITY 56 0/0 BAROMETER 758 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		E.Z. GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
1798	0	100.0	92	83			369	257			482					0
1798	1.3	50.0	37	34												0
1798	2.1	14.6	17	15												0
1798	5.0	1.0	2	2												0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

116
 105

STANDARD DEVIATIONS
 .63 .63 .63
 -607 519

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

113 110
 STANDARD DEVIATIONS
 .06 .06

.98

0

0

GULF OF GUAYAQUIL CRUISE 6323 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 30 AUG 1963
 TIME 0640- WEATHER CLOUD COVER 10/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 24.1 C AIR TEMP. (WET) 20.9 C AIR TEMP. (DRY) 21.2 C
 RELATIVE HUMIDITY 96 0/0 BAROMETER 760 MM TIDE FLOODING, -10/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		E.Z. GROSS PROD MG/M2	SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2		
1810	0	100.0	87	76		1521	2975	67						0	
1810	1.3	50.0	29	24										0	
1810	2.1	14.6	26	24										0	
1810	5.0	1.0	1	1										0	

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

113
 98

14611

72

STANDARD DEVIATIONS
 .16 .20 .20

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC NIGHT
 RESP.
 MG/M3

- .07

105

-1454

STANDARD DEVIATIONS
 .12 .03

GULF OF GUAYAQUIL CRUISE 6324 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 11 SEP 1963
 TIME 0612- WEATHER CLOUD COVER 10/10 WIND VELOCITY 9KT (4.5 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH 10.0 M SEA TEMP. 21.1 C AIR TEMP.(WET) 20.0 C AIR TEMP.(DRY) 21.0 C
 RELATIVE HUMIDITY 91 0/0 BAROMETER 761 MM TIDE EBBING 3/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
1822	0	100.0	10	6		27	-49	103			0
1822	3.5	50.0	3	3							0
1822	10.5	14.6	5	5							0
1822	25.0	1.0	-3	-3							0

INTEGRATED HIGH PRODUCTIVITY 22
 INTEGRATED MEAN PRODUCTIVITY 17

STANDARD DEVIATIONS
 .05 .08 .08
 -3244 553

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

76 0 0 0
 STANDARD DEVIATIONS
 .07 0

GULF OF GUAYAQUIL CRUISE 6324 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 13 SEP 1963
 TIME 0633- WEATHER CLOUD COVER 10/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 335-345 T
 SECCHI DISK DEPTH 10.0 M SEA TEMP. 21.7 C AIR TEMP.(WET) 19.3 C AIR TEMP.(DRY) 20.9 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 762 MM TIDE EBBING 0/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
1834	0	100.0	23	19		23	-13	59			0
1834	3.5	50.0	22	22							0
1834	10.5	14.6	4	3							0
1834	25.0	1.0	0	0							0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

172
 92
 STANDARD DEVIATIONS
 .03 .04 .04
 -1489 320

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
36	0	0	0	0

STANDARD DEVIATIONS
 .02

GULF OF GUAYAQUIL CRUISE 6324 STATION 7- 0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 14 SEP 1963
 TIME 0616- WEATHER CLOUD COVER 7-8/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH 16.0 M SEA TEMP. 20.8 C AIR TEMP.(WET) 19.9 C AIR TEMP.(DRY) 20.1 C
 RELATIVE HUMIDITY 98 0/0 BAROMETER 760 MM TIDE FLOODING, -9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	NET(24) PROD MG/M2	GROSS PROD MG/M2	
1846	0	100.0	7	7		24	-132	180					0	
1846	6.0	50.0	14	13									0	
1846	17.0	14.6	3	3									0	
1846	40.0	1.0	0	0									0	

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

106
97

STANDARD DEVIATIONS
 .03 .10 .10
 -10922 1549

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

156 0
 STANDARD DEVIATIONS
 .09 0

0 0

GULF OF GUAYAQUIL CRUISE 6325 STATION V-1 LAT. 02 34.0 S LONG. 80 06.5 W DATE 17 SEP 1963
 TIME 1732- WEATHER CLOUD COVER 7-8/10 WIND VELOCITY 18KT (9.0 M/SEC) WIND DIR. 205-215 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 24.8 C AIR TEMP.(WET) 22.5 C AIR TEMP.(DRY) 25.5 C
 RELATIVE HUMIDITY 78 0/0 BAROMETER 760 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	E.Z. GROSS PROD MG/M2	SIG
1858	0	100.0	131	118		451	391	510			0
1858	.5	50.0	105	105							0
1858	1.2	14.6	34	17							0
1858	2.5	1.0	2	1							0

INTEGRATED HIGH PRODUCTIVITY 117
 INTEGRATED MEAN PRODUCTIVITY 98

STANDARD DEVIATIONS
 .02 .04 .04
 -23 274

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3
 59 -2421
 STANDARD DEVIATIONS
 .03 .06

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3
 0 0
 -40.76

GULF OF GUAYAQUIL CRUISE 6325 STATION F-2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 19 SEP 1963
 TIME 0632- WEATHER CLOUD COVER 7-8/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 285-295 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 24.0 C AIR TEMP.(WET) 20.9 C AIR TEMP.(DRY) 22.1 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 762 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
1870	0	100.0	93	86		401	285	518			0
1870	.5	50.0	70	70							0
1870	1.2	14.6	17	14							0
1870	2.5	1.0	5	4							0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

80
74

-304

279

STANDARD DEVIATIONS
 .11 .11 .11

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

117 58
 STANDARD DEVIATIONS
 .02 .05

.49

105.85

548

GULF OF GUAYAQUIL CRUISE 6325 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 20 SEP 1963
 TIME 0616- WEATHER CLOUD COVER 9/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 23.5 C AIR TEMP.(WET) 21.9 C AIR TEMP.(DRY) 22.0 C
 RELATIVE HUMIDITY 99 0/0 BAROMETER 761 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	GROSS PROD MG/M2	SIG.
1882	0	100.0	60	48		-220	-734	295			0
1882	.5	50.0	17	16							0
1882	1.2	14.6	10	8							0
1882	2.5	1.0	3	3							0

INTEGRATED HIGH PRODUCTIVITY 34
 INTEGRATED MEAN PRODUCTIVITY 29

STANDARD DEVIATIONS
 .09 .11 .11
 -2414 159

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

515 -18
 STANDARD DEVIATIONS
 .06 .08

GULF OF GUAYAQUIL CRUISE 6326 STATION V-2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 2 OCT 1963
 TIME 0623- WEATHER CLOUD COVER 9/10 WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 265-275 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 24.3 C AIR TEMP.(WET) 19.1 C AIR TEMP.(DRY) 20.5 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 762 MM TIDE FLOODING, -1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	NET(24) MG/M2	GROSS PROD MG/M2	
1895	0	100.0	66	32		234	197		270				0	
1895	.5	50.0	40	40									0	
1895	1.2	14.6	14	13									0	
1895	2.5	1.0	0	0									0	

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

49 1
 94 1

-36

145

STANDARD DEVIATIONS
 .05 .06 .06

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

36 -2700 0 0

-74.63

STANDARD DEVIATIONS
 .04 .07

GULF OF GUAYAQUIL CRUISE 6326 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 4 OCT 1963
 TIME 0622- WEATHER CLOUD COVER 5/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 23.3 C AIR TEMP.(WET) 20.0 C AIR TEMP.(DRY) 21.0 C
 RELATIVE HUMIDITY 91 0/0 BAROMETER 761 MM TIDE FLOODING, -1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS	
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2
1906	0	100.0	86	82		324	187	461							0
1906	1.3	50.0	22	21											0
1906	2.1	14.6	7	6											0
1906	5.0	1.0	1	1											0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

78
74

-871 496

STANDARD DEVIATIONS
 .11 .12 .12

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

137 140
 STANDARD DEVIATIONS
 .03 .01

1.02

111.84 515

GULF OF GUAYAQUIL CRUISE 6326 STATION F-2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 3 OCT 1963
 TIME 0633- WEATHER CLOUD COVER 9/10 WIND VELOCITY KT (M/SEC) WIND DIR. - F
 SECCHI DISK DEPTH .5 M SEA TEMP. 24.6 C AIR TEMP. (WET) 19.0 C AIR TEMP. (DRY) 20.9 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 761 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SI
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
	0	100.0	0	0		2757	5129	386			0
		50.0	0	0							0
		14.6	0	0							0
		1.0	0	0							0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

0
0

6033 104

STANDARD DEVIATIONS
 .06 .06 .06

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC NIGHT
 RESP.
 MG/M3

-05

-2372 115
 STANDARD DEVIATIONS
 .03 .01

0

GULF OF GUAYAQUIL CRUISE 6327 STATION 3-0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 9 OCT 1963
 TIME 0638- WEATHER 10/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH 10.0 M SEA TEMP. 22.8 C AIR TEMP. (WET) 19.3 C AIR TEMP. (DRY) 21.0 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 763 MM TIDE EBBING 8/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD	MG/M3	PROD	MG/M3	PROD	MG/M3	PROD	MG/M2	PROD	MG/M2	
1918	0	100.0	10	8			85		54		115					0
1918	4.0	50.0	1	1												0
1918	10.5	14.6	7	7												0
1918	25.0	1.0	3	2												0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

85
64

-899

619

STANDARD DEVIATIONS
 .08 .08 .08

SECRETED MATTER
 C14/O2 SFC
 PER O2 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC NIGHT
 RESP.
 MG/M3

0 0 0

0

0

STANDARD DEVIATIONS
 .02 0

GULF OF GUAYAQUIL CRUISE 6327 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 10 OCT 1963
 TIME 0716- WEATHER CLOUD COVER 10/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 12.0 M SEA TEMP. 22.6 C AIR TEMP.(WET) 19.8 C AIR TEMP.(DRY) 21.2 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 763 MM TIDE EBBING 6/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M2	PROD MG/M3	MG/M2	PROD MG/M3	MG/M2	PROD MG/M2	GROSS PROD MG/M2	
1930	0	100.0	12	9		7	-85	100					0	
1930	4.5	50.0	5	5									0	
1930	12.5	14.6	4	3									0	
1930	30.0	1.0	1	1									0	

INTEGRATED HIGH PRODUCTIVITY 110
 INTEGRATED MEAN PRODUCTIVITY 92

STANDARD DEVIATIONS
 .01 .03 .03
 -4926 648

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER SFC AMOUNT MG/M3
			C14/02 PER 02 PROD	0	
93	0	0	0	0	0
STANDARD DEVIATIONS .02	0				

GULF OF GUAYAQUIL CRUISE 6327 STATION 7- 0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 11 OCT 1963
 TIME 0732- WEATHER CLOUD COVER 10/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH 14.0 M SEA TEMP. 22.4 C AIR TEMP.(WET) 19.5 C AIR TEMP.(DRY) 21.0 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 763 MM TIDE EBBING 4/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	
1942	0	100.0	6	5		15	-161			190				0
1942	5.5	50.0	8	7										0
1942	14.5	14.6	2	2										0
1942	35.0	1.0	1	1										0

INTEGRATED HIGH PRODUCTIVITY 67
 INTEGRATED MEAN PRODUCTIVITY 58

STANDARD DEVIATIONS
 .02 .06 .06
 -10856 1432

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
1/6	0	0	0	0
STANDARD DEVIATIONS 0				

GULF OF GUAYAQUIL CRUISE 6328 STATION V-2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 23 OCT 1963
 TIME 0617- WEATHER CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - F
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 25.0 C AIR TEMP.(WET) 20.0 C AIR TEMP.(DRY) 23.0 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 762 MM TIDE EBBING 7/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIS
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
1954	0	100.0	78	72		507	-1953				2968					0
1954	.5	50.0	59	56												0
1954	1.2	14.6	16	13												0
1954	2.5	1.0	0	0												0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

63
56

STANDARD DEVIATIONS
 .05 .05 .05
 -10705 1597

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
2460	46	.02	180.48	5356
STANDARD DEVIATIONS				
.00	.02			

GULF OF GUAYAQUIL CRUISE 6328 STATION F-2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 24 OCT 1963
 TIME 0641- WEATHER 9/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH .5 M SEA TEMP. 25.0 C AIR TEMP.(WET) 19.9 C AIR TEMP.(DRY) 22.0 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 762 MM TIDE EBBING 7/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	E.Z. GROSS PROD MG/M2
1966	.3	50.0	64	61						0
1966	.5	14.6	23	21						0
1966	1.2	1.0	0	0						0

INTEGRATED HIGH PRODUCTIVITY 34
 INTEGRATED MEAN PRODUCTIVITY 32

STANDARD DEVIATIONS
 .01 .02 .02

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED C14/02 PER 02 PROD	MATTER SFC AMOUNT MG/M3

STANDARD DEVIATIONS
 .01 .02

GULF OF GUAYAQUIL CRUISE 6328 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 25 OCT 1963
 TIME 0602- WEATHER CLOUD COVER 9/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 24.0 C AIR TEMP.(WET) 20.0 C AIR TEMP.(DRY) 22.2 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 762 MM TIDE EBBING 4/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		E.Z. GROSS PROD MG/M2	SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2		
1978	0	100.0	44	41		2495	5098				-107				0
1978	.6	50.0	34	33											0
1978	1.5	14.6	7	1											0
1978	3.7	1.0	3	2											0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

49
 33

19431

-86

STANDARD DEVIATIONS
 .01 .06 .06

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

2572.31 -2750

-1.06

-2602 2746
 STANDARD DEVIATIONS
 .06 .01

GULF OF GUAYAQUIL CRUISE 6329 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 6 NOV 1963
 TIME 0702- WEATHER CLOUD COVER 10/10 WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 265-275 T
 SECCHI DISK DEPTH 10.0 M SEA TEMP. 22.4 C AIR TEMP.(WET) 18.8 C AIR TEMP.(DRY) 20.4 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 763 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z.		NET(12)		NET(24)		GROSS		E.Z.		NET(24)		GROSS		E.Z.		SIG
					PROD	MG/M2	PROD	MG/M3	PROD	MG/M3	PROD	MG/M3	PROD	MG/M2	PROD	MG/M2	PROD	MG/M2	PROD	MG/M2	
1990	0	100.0	11	9				36		-90		162									0
1990	4.0	50.0	2	1																	0
1990	10.5	14.6	1	0																	0
1990	25.0	1.0	0	0																	0

INTEGRATED HIGH PRODUCTIVITY 32
 INTEGRATED MEAN PRODUCTIVITY 25

STANDARD DEVIATIONS
 .04 .06
 -5425 873

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER	
			C14/02 PER 02 PROD	0	SFC AMOUNT MG/M3	0
126	0	0		0		0
STANDARD DEVIATIONS	0					
.05						

GULF OF GUAYAQUIL CRUISE 6329 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 7 NOV 1963
 TIME 0747- WEATHER CLOUD COVER 10/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH 12.0 M SEA TEMP. 22.5 C AIR TEMP.(WET) 20.2 C AIR TEMP.(DRY) 21.3 C
 RELATIVE HUMIDITY 91 0/0 BAROMETER 763 MM TIDE EBBING 10/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS PROD MG/M3	E.Z. NET(24)		GROSS PROD MG/M2	SLO
						PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M3		PROD MG/M2	PROD MG/M2		
2002	0	100.0	16	15		25		-84		134			0	
2002	4.5	50.0	1	1									0	
2002	12.5	14.6	4	4									0	
2002	30.0	1.0	0	0									0	

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

43
 36

STANDARD DEVIATIONS
 .02 .07 .07
 -5698 968

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

109 0
 STANDARD DEVIATIONS
 .07 0

170.08 229

GULF OF GUAYAQUIL CRUISE 6329 STATION 7-0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 8 NOV 1963
 TIME 0742- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY 9KT (4.5 M/SEC) WIND DIR. 205-215 T
 SECCHI DISK DEPTH 10.0 M SEA TEMP. 21.2 C AIR TEMP.(WET) 19.2 C AIR TEMP.(DRY) 21.0 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 763 MM TIDE EBBING 9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.	
									NET(24) PROD MG/M2	GROSS PROD MG/M2
2014	0	100.0	37	36		243	142	344		
2014	4.0	50.0	14	12						
2014	10.5	14.6	5	4						
2014	25.0	1.0	0	0						

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

171
 152

-3196 1851

STANDARD DEVIATIONS
 .07 .07 .07

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
101	0	0	118.89	409
STANDARD DEVIATIONS				
.03	0			

GULF OF GUAYAQUIL CRUISE 6330 STATION V-2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 13 NOV 1963
 TIME 0629- WEATHER 9/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 24.4 C AIR TEMP.(WET) 19.9 C AIR TEMP.(DRY) 22.0 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 763 MM TIDE FLOODING, -4/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIL
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2			
2026	0	100.0	72	72		360	-2100				2820					0
2026	.3	50.0	63	57												0
2026	.5	14.6	14	12												0
2026	1.2	1.0	0	0												0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

27
 25

-5392

759

STANDARD DEVIATIONS
 .03 .03 .03

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC DAY SFC NIGHT
 RESP.
 MG/M3

184.69 5209

2460 0
 STANDARD DEVIATIONS
 .00

GULF OF GUAYAQUIL CRUISE 6330 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 14 NOV 1963
 TIME 0639- WEATHER CLOUD COVER 9/10 WIND VELOCITY SKT (2.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 24.4 C AIR TEMP.(WET) 20.0 C AIR TEMP.(DRY) 21.9 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 764 MM TIDE FLOODING, -3/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
2038	0	100.0	148	148		672	614	730			0
2038	.5	50.0	99	92							0
2038	1.2	14.6	28	25							0
2038	2.5	1.0	2	1							0

INTEGRATED HIGH PRODUCTIVITY 112
 INTEGRATED MEAN PRODUCTIVITY 105

STANDARD DEVIATIONS
 .03 .05 .05

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY	SFC NIGHT	DAY/NIGHT
58	21	.36
STANDARD DEVIATIONS		
.04 .01		

GULF OF GUAYAQUIL CRUISE 6330 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 15 NOV 1963
 TIME 0635- WEATHER CLOUD COVER 7-8/10 WIND VELOCITY SKT (2.5 M/SEC) WIND DIR. 105-115 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 23.5 C AIR TEMP.(WET) 19.9 C AIR TEMP.(DRY) 21.9 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 764 MM TIDE FLOODING, -4/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
2050	0	100.0	100	90			2602	5189			14					0
2050	.5	50.0	50	47												0
2050	1.2	14.6	20	19												0
2050	2.5	1.0	1	1												0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

68
 64

12945

8

STANDARD DEVIATIONS
 .08 .09 .09

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

0 0

-.01

28

-2588

STANDARD DEVIATIONS
 .03 .04

GULF OF GUAYAQUIL CRUISE 6333 STATION V-2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 4 DEC 1963
 TIME 0633- WEATHER CLOUD COVER 10/10 WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 215-225 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 25.3 C AIR TEMP.(WET) 21.7 C AIR TEMP.(DRY) 23.4 C
 RELATIVE HUMIDITY 88 0/0 BAROMETER 761 MM TIDE EBBING 9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
2086	0	100.0	79	77		436	501	371			1
2086	.3	50.0	55	54							1
2086	.5	14.6	17	15							1
2086	1.2	1.0	0	0							1

INTEGRATED HIGH PRODUCTIVITY 27
 INTEGRATED MEAN PRODUCTIVITY 26

STANDARD DEVIATIONS
 .07 .13 .13

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED C14/02 PER 02 PROD	MATTER SFC AMOUNT MG/M3
-65	26	- .40	61.67	229

STANDARD DEVIATIONS
 .11 .03

GULF OF GUAYAQUIL CRUISE 6333 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 5 DEC 1963
 TIME 0643- WEATHER CLOUD COVER WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 25.4 C AIR TEMP.(WET) 21.8 C AIR TEMP.(DRY) 23.6 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 760 MM TIDE EBBING 8/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SI,
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
2098	0	100.0	96	94		423	469	377			1
2098	.3	50.0	65	62							1
2098	.5	14.6	9	8							1
2098	1.2	1.0	0	-0							1

INTEGRATED HIGH PRODUCTIVITY 29 1
 INTEGRATED MEAN PRODUCTIVITY 31 1

STANDARD DEVIATIONS
 .09 .26 .26

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

-46 -10
 STANDARD DEVIATIONS .21 237
 .25 .03

GULF OF GUAYAQUIL CRUISE 6333 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 6 DEC 1963
 TIME 0700-0708 WEATHER CLOUD COVER 10/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 25.0 C AIR TEMP.(WET) 21.5 C AIR TEMP.(DRY) 23.3 C
 RELATIVE HUMIDITY 84 0/0 BARUMETER 761 MM TIDE EBBING 9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. E.7.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	PROD MG/M2	
2110	0	100.0	67	60		195	180			210			1	
2110	.5	50.0	67	67									1	
2110	1.2	14.6	14	12									1	
2110	2.5	1.0	1	1									1	

INTEGRATED HIGH PRODUCTIVITY 63 1
 INTEGRATED MEAN PRODUCTIVITY 154 1

STANDARD DEVIATIONS
 .06 .07 .07

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/O2 PER O2 PROD	SFC AMOUNT MG/M3
15	-2147	-141.35	0	0

STANDARD DEVIATIONS
 .03 .16

GULF OF GUAYAQUIL CRUISE 6334 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 11 DEC 1963
 TIME 0629- WEATHER CLOUD COVER 7-8/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 10.0 M SEA TEMP. 23.6 C AIR TEMP.(WET) 21.8 C AIR TEMP.(DRY) 22.8 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 761 MM TIDE FLOODING, -9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2			
2122	0	100.0	8	6		15		10		20						1
2122	4.0	50.0	3	2												1
2122	10.5	14.6	1	1												1
2122	25.0	1.0	0	0												1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

36
 30

STANDARD DEVIATIONS
 .07 .07 .07
 -139 107

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

5
 STANDARD DEVIATIONS
 .03

0

0

0

GULF OF GUAYAQUIL CRUISE 6334 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 12 DEC 1963
 TIME 0621- WEATHER CLOUD COVER 1/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 175-185 T
 SECCHI DISK DEPTH 12.0 M SEA TEMP. 24.0 C AIR TEMP.(WET) 22.0 C AIR TEMP.(DRY) 24.1 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 760 MM TIDE FLOODING, -8/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SLO
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	GROSS PROD MG/M2	
2134	0	100.0	35	34		72	6	138						1
2134	4.5	50.0	16	14										1
2134	12.5	14.6	7	6										1
2134	30.0	1.0	0	0										1

INTEGRATED HIGH PRODUCTIVITY 223
 INTEGRATED MEAN PRODUCTIVITY 203

STANDARD DEVIATIONS
 .13 .14 .14
 -3073 893

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/O2 PER O2 PROD	SFC AMOUNT MG/M3
66	0	0	123.54	171
STANDARD DEVIATIONS .05 0				

GULF OF GUAYAQUIL CRUISE 6334 STATION 7- 0 LAI. 03 08.0 S LONG. 80 51.0 W DATE 12 DEC 1963
 TIME 0647- WEATHER CLOUD COVER 4/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 14.0 M SEA TEMP. 23.3 C AIR TEMP.(WET) 21.0 C AIR TEMP.(DRY) 22.7 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 760 MM TIDE FLOODING, -9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		E.Z. GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2			
2146	0	100.0	22	20		142	135	149								1
2146	5.5	50.0	14	14												1
2146	14.5	14.6	6	5												1
2146	35.0	1.0	0	0												1

INTEGRATED HIGH PRODUCTIVITY 223
 INTEGRATED MEAN PRODUCTIVITY 206

STANDARD DEVIATIONS
 .09 .10 .10

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

7 0 0 90.86 135
 STANDARD DEVIATIONS
 .03 0

GULF OF GUAYAQUIL CRUISE 6335 STATION V-2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 18 DEC 1963
 TIME 0627- WEATHER CLOUD COVER 7-8/10 WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 26.1 C AIR TEMP.(WET) 21.1 C AIR TEMP.(DRY) 23.7 C
 RELATIVE HUMIDITY 80 0/0 BAROMETER 761 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS PROD MG/M3	E.Z. PROD MG/M2		GROSS PROD MG/M2	SLO
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3		PROD MG/M2	MG/M2		
2158	0	100.0	91	91		516	473	558					1	
2158	.3	50.0	65	57									1	
2158	.5	14.6	16	13									1	
2158	1.2	1.0	0	0									1	

INTEGRATED HIGH PRODUCTIVITY 31
 INTEGRATED MEAN PRODUCTIVITY 28

STANDARD DEVIATIONS
 .07 .07 .07

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED C14/02 PER 02 PROD	MATTER SFC AMOUNT MG/M3	42 STANDARD DEVIATIONS .02
		.39			

GULF OF GUAYAQUIL CRUISE 6335 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 19 DEC 1963
 TIME 0627- WEATHER CLOUD COVER 9/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 26.0 C AIR TEMP.(WET) 22.0 C AIR TEMP.(DRY) 23.1 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 761 MM TIDE EBBING 10/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	NET(24) PROD MG/M2	GROSS PROD MG/M2	
2170	0	100.0	65	60		2106	4238			-25				1
2170	.5	50.0	73	67										1
2170	1.2	14.6	19	16										1
2170	2.5	1.0	5	3										1

INTEGRATED HIGH PRODUCTIVITY 179
 INTEGRATED MEAN PRODUCTIVITY 162

STANDARD DEVIATIONS
 .10 .11 .11
 10646 -14

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

-2132 17
 STANDARD DEVIATIONS
 .05 .02 .01
 8710.73 -2217

GULF OF GUAYAQUIL CRUISE 6335 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 20 DEC 1963
 TIME 0641- WEATHER CLOUD COVER 5/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 75- 85 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 25.5 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 24.1 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 760 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	E.Z. GROSS PROD MG/M2	SIG
2182	0	100.0	65	65		165	83	246			1
2182	.5	50.0	48	45							1
2182	1.2	14.6	77	67							0
2182	2.5	1.0	1	1							1

INTEGRATED HIGH PRODUCTIVITY 139
 INTEGRATED MEAN PRODUCTIVITY 126

STANDARD DEVIATIONS
 .14 .15 .15
 -276 133

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

82 77
 STANDARD DEVIATIONS
 .05 .07
 106.67 263
 .94

GULF OF GUAYAQUIL CRUISE 6401 STATION V- 2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 8 JAN 1964
 TIME 0657- WEATHER CLOUD COVER 10/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 265-275 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 26.9 C AIR TEMP.(WET) 22.0 C AIR TEMP.(DRY) 23.8 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 760 MM TIDE EBBING 0/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z.		NET(12)		NET(24)		E.Z.		SIG
					PROD	MG/M2	PROD	MG/M3	PROD	MG/M2	PROD	MG/M2	
2194	0	100.0	92	76			304	223	385				1
2194	.5	50.0	61	61									1
2194	1.2	14.6	25	20									1
2194	2.5	1.0	-0	-0									1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

75
68

STANDARD DEVIATIONS
 .09 .11 .11
 -197 207

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PRUD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

81 18
 STANDARD DEVIATIONS
 .05 .01

.23

0 0

GULF OF GUAYAQUIL CRUISE 6401 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 9 JAN 1964
 TIME 0658- WEATHER CLOUD COVER 9/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 285-295 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 27.3 C AIR TEMP.(WET) 23.0 C AIR TEMP.(DRY) 25.0 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 760 MM TIDE FLOODING, -9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M2	GROSS PROD MG/M3	E.Z. PROD MG/M2	GROSS PROD MG/M2	SIG
2206	0	100.0	83	79		197	370				1
2207	1.5	50.0	31	28							1
2208	2.2	14.6	10	8							1
2209	2.5	1.0	0	0							1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

44
 39

18 199

STANDARD DEVIATIONS
 .09 .09 .09

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

DAY/NIGHT

SFC DAY SFC NIGHT
 RESP.
 MG/M3

88.55 328

.65

24

STANDARD DEVIATIONS
 .02 .01

GULF OF GUAYAQUIL CRUISE 6401 STATION P- 2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 10 JAN 1964
 TIME 0652- WEATHER CLOUD COVER 10/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 26.5 C AIR TEMP.(WET) 23.5 C AIR TEMP.(DRY) 25.1 C
 RELATIVE HUMIDITY 88 0/0 BAROMETER 761 MM TIDE FLOODING, -9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	
2218	0	100.0	136	113		628	484	772					1	
2218	1.3	50.0	38	32									1	
2218	2.1	14.6	22	20									1	
2218	5.0	1.0	0	0									1	

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

135
 114

-608

831

STANDARD DEVIATIONS
 .08 .08 .08

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

0 0

1.48

214

STANDARD DEVIATIONS
 .02 .25

GULF OF GUAYAQUIL CRUISE 6402 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 15 JAN 1964
 TIME 0615- WEATHER CLOUD COVER 9/10 WIND VELOCITY SKT (2.5 M/SEC) WIND DIR. 265-275 T
 SECCHI DISK DEPTH 10.0 M SEA TEMP. 24.2 C AIR TEMP.(WET) 23.0 C AIR TEMP.(DRY) 24.6 C
 RELATIVE HUMIDITY 88 0/0 BAROMETER 761 MM TIDE FLOODING, -2/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. GROSS PROD MG/M2	SIG
						PROD MG/M3	PROD MG/M3	PROD MG/M2	PROD MG/M2	PROD MG/M3	PROD MG/M3		
2230	0	100.0	12	11		40	14			66		1	
2230	4.0	50.0	2	2								1	
2230	10.5	14.6	1	1								1	
2230	25.0	1.0	1	1								1	

INTEGRATED HIGH PRODUCTIVITY 31
 INTEGRATED MEAN PRODUCTIVITY 26

STANDARD DEVIATIONS
 .04 .06 .06
 -941 355

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED C14/02 PER 02 PROD	MATTER SFC AMOUNT MG/M3	26 STANDARD DEVIATIONS .05
	0	0			

GULF OF GUAYAQUIL CRUISE 6402 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 16 JAN 1964
 TIME 0638- WEATHER CLOUD COVER 7-8/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH 12.0 M SEA TEMP. 24.4 C AIR TEMP.(WET) 23.9 C AIR TEMP.(DRY) 24.9 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 761 MM TIDE FLOODING, -1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SLO
						PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M2	PROD MG/M2	PROD MG/M2	PROD MG/M2			
2242	0	100.0	15	14		5	-311			321						1
2242	4.5	50.0	7	6												1
2242	12.5	14.6	55	54												1
2242	30.0	1.0	1	1												1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

272
 254

STANDARD DEVIATIONS
 .05 .19 .19
 -16899 2075

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

310 0 0
 STANDARD DEVIATIONS
 .18 0

GULF OF GUAYAQUIL CRUISE 6402 STATION 7-0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 17 JAN 1964
 TIME 0633- WEATHER CLOUD COVER 9/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 215-225 T
 SECCHI DISK DEPTH 14.0 M SEA TEMP. 23.8 C AIR TEMP.(WET) 23.0 C AIR TEMP.(DRY) 24.2 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 761 MM TIDE FLOODING, -1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	
2254	0	100.0	15	15		0	-229	229						1
2254	5.5	50.0	7	6										1
2254	14.5	14.6	2	2										1
2254	35.0	1.0	-0	-0										1

INTEGRATED HIGH PRODUCTIVITY 92
 INTEGRATED MEAN PRODUCTIVITY 87

STANDARD DEVIATIONS
 .06 .10
 -14314 1725

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/O2 PER O2 PROD	SFC AMOUNT MG/M3
229	0	0	193.62	444

STANDARD DEVIATIONS
 .09 0

GULF OF GUAYAQUIL CRUISE 6403 STATION V-2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 23 JAN 1964
 TIME 0709- WEATHER CLOUD COVER 9/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 285-295 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 27.7 C AIR TEMP.(WET) 24.1 C AIR TEMP.(DRY) 25.0 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 762 MM TIDE EBBING 1/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
2275	0	100.0	182	166		541	287				795			1
2275	.5	50.0	137	123										1
2275	1.2	14.6	27	23										1
2275	2.5	1.0	-0	-0										1

INTEGRATED HIGH PRODUCTIVITY 137
 INTEGRATED MEAN PRODUCTIVITY 123

STANDARD DEVIATIONS
 .23 .27 .27
 -843 428

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RES.
 MG/M3 MG/M3

254 189
 STANDARD DEVIATIONS
 .16 .15

.74

0

0

GULF OF GUAYAQUIL CRUISE 6403 STATION F-1 LAT. 02 44.3 S LONG. 79 54.0 W DATE 23 JAN 1964
 TIME 1301- WEATHER 03 CLOUD COVER 9/10 WIND VELOCITY KT (M/SEC) WIND DIR. - I
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 29.8 C AIR TEMP.(WET) 27.1 C AIR TEMP.(DRY) 32.5 C
 RELATIVE HUMIDITY 65 0/0 BAROMETER 760 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.	
									NET(24) PROD MG/M2	GROSS PROD MG/M2
2277	0	100.0	101	95		371	263	479		
2277	.6	50.0	109	100						
2277	1.5	14.6	9	9						
2277	3.7	1.0	-5	-6						

INTEGRATED HIGH PRODUCTIVITY 198
 INTEGRATED MEAN PRODUCTIVITY 184

STANDARD DEVIATIONS
 .11 .17 .17
 -4.24 .87

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/U2 PER O2 PROD	SFC AMOUNT MG/M3
108	155	1.44	102.75	493
STANDARD DEVIATIONS				
.11	.09			

GULF OF GUAYAQUIL CRUISE 6403 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 25 JAN 1964
 TIME 0643- WEATHER CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 26.6 C AIR TEMP.(WET) 23.8 C AIR TEMP.(DRY) 24.8 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 762 MM TIDE FLOODING,-10/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
2289	0	100.0	89	89		411	393	430			1
2289	1.3	50.0	83	78							1
2289	2.1	14.6	22	20							1
2289	5.0	1.0	-1	-1							1

INTEGRATED HIGH PRODUCTIVITY 149
 INTEGRATED MEAN PRODUCTIVITY 144

STANDARD DEVIATIONS
 .14 .22 .22

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

83.63 359

21.02

18 385
 STANDARD DEVIATIONS
 .17 .11

GULF OF GUAYAQUIL CRUISE 6404 STATION V-2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 5 FEB 1964
 TIME 0648- WEATHER CLOUD COVER 10/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 265-275 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 28.6 C AIR TEMP.(WET) 23.2 C AIR TEMP.(DRY) 24.8 C
 RELATIVE HUMIDITY 88 O/O BAROMETER 760 MM TIDE EBBING 2/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	E.Z. GROSS PROD MG/M2	SIG
2301	0	100.0	135	135		713	876	549			1
2301	.3	50.0	107	104							1
2301	.5	14.6	30	23							1
2301	1.2	1.0	2	2							1

INTEGRATED HIGH PRODUCTIVITY 53
 INTEGRATED MEAN PRODUCTIVITY 49

STANDARD DEVIATIONS
 .35 .99 .99

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

-153 -181 251

1.11

STANDARD DEVIATIONS
 .93 .06

GULF OF GUAYAQUIL CRUISE 6404 STATION F-2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 6 FEB 1964
 TIME 0637- WEATHER CLOUD COVER 10/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 85- 95 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 27.5 C AIR TEMP.(WET) 23.9 C AIR TEMP.(DRY) 24.5 C
 RELATIVE HUMIDITY 96 0/0 BAROMETER 760 MM TIDE EBBING 0/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS PROD MG/M3	E.Z. PROD MG/M2		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3		PROD MG/M2	MG/M2	
2313	0	100.0	73	69		310	365	255					1
2313	.5	50.0	59	54									1
2313	1.2	14.6	21	17									1
2313	2.5	1.0	9	8									1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

76
 68

412 137

STANDARD DEVIATIONS
 .11 .16 .16

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

51.54 131

-2.70

-55 148
 STANDARD DEVIATIONS
 .11 .09

GULF OF GUAYAQUIL CRUISE 6404 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 7 FEB 1964
 TIME 0622- WEATHER CLOUD COVER 9/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 335-345 T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 28.2 C AIR TEMP.(WET) 24.9 C AIR TEMP.(DRY) 26.1 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 760 MM TIDE EBBING 0/10

SAMPLE NUMBER	DEPTH M	O/O LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M3	NET(12)		NET(24)		GROSS PROD MG/M3	E.Z.	
						PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M3		NET(24) PROD MG/M3	GROSS PROD MG/M3
2323	1	101	273	247								
2325	1.4	97	77	77								
2325	2.1	145	20	20								
2325	3.0	100	4	4								

INTEGRATED HIGH PRODUCTIVITY 258
 INTEGRATED MEAN PRODUCTIVITY 214

STANDARD DEVIATIONS
 .16 .33 .33

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. 477
 MG/M3

-17 -28.11
 STANDARD DEVIATIONS
 .29 .07

GULF OF GUAYAQUIL CRUISE 6405 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 10 FEB 1964
 TIME 0716- WEATHER CLOUD COVER 10/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH 10.0 M SEA TEMP. 26.3 C AIR TEMP.(WET) 23.7 C AIR TEMP.(DRY) 24.7 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 761 MM TIDE FLOODING, -9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
2338	0	100.0	12	5		27	17			37						1
2338	4.0	50.0	0	0												1
2338	10.5	14.6	24	20												0
2338	25.0	1.0	0	0												1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

102
 74

-292

199

STANDARD DEVIATIONS
 .05 .06 .06

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

10 0 0 0
 STANDARD DEVIATIONS
 .03 0

GULF OF GUAYAQUIL CRUISE 6405 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 11 FEB 1964
 TIME 0811- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 65- 75 T
 SECCHI DISK DEPTH 8.0 M SEA TEMP. 26.0 C AIR TEMP.(WET) 24.2 C AIR TEMP.(DRY) 26.1 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 761 MM TIDE FLOODING, -9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z.		NET(12)		NET(24)		GROSS		E.Z.		SIG
					PROD MG/M2	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2			
2349	0	100.0	43	42	76	-60	212								1
2349	3.0	50.0	4	4											1
2349	8.0	14.6	12	9											1
2349	20.0	1.0	0	0											1

INTEGRATED HIGH PRODUCTIVITY 77
 INTEGRATED MEAN PRODUCTIVITY 69

STANDARD DEVIATIONS
 .06 .09 .09
 -4537 913

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
136	0	0	144.24	306
STANDARD DEVIATIONS .07 0				

GULF OF GUAYAQUIL CRUISE 6405 STATION 7- 0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 12 FEB 1964
 TIME 0737- WEATHER CLOUD COVER 10/10 WIND VELOCITY 4KT (2.0 M/SFC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH 6.0 M SEA TEMP. 25.2 C AIR TEMP.(WET) 23.3 C AIR TEMP.(DRY) 24.0 C
 RELATIVE HUMIDITY 96 0/0 BAROMETER 761 MM TIDE FLOODING, -8/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		E.Z. GROSS		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2	
2361	0	100.0	69	59		168	145	192								1
2361	2.5	50.0	9	9												1
2361	6.0	14.6	8	6												1
2361	15.0	1.0	0	0												1

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

121
 103

-78

618

STANDARD DEVIATIONS
 .17 .17 .17

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RFSP. RESP.
 MG/M3 MG/M3

23 0 0
 STANDARD DEVIATIONS
 .03 0

GULF OF GUAYAQUIL CRUISE 6408 STATION F-2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 29 FEB 1964
 TIME 0656- WEATHER CLOUD COVER 9/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 195-205 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 27.1 C AIR TEMP.(WET) 23.1 C AIR TEMP.(DRY) 24.9 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 760 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
2403	0	100.0	1	0		1215	1121	1310			1
2403	.5	50.0	0	0							1
2403	1.2	14.6	0	0							1
2403	2.5	1.0	0	0							1

INTEGRATED HIGH PRODUCTIVITY 0
 INTEGRATED MEAN PRODUCTIVITY 0

STANDARD DEVIATIONS
 .16 .25 .25

233 105

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

94 0 0 0

STANDARD DEVIATIONS
 .19

GULF OF GUAYAQUIL CRUISE 6408 STATION P- 2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 1 MAR 1964
 TIME 0637- WEATHER CLOUD COVER 10/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 35- 45 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 25.0 C AIR TEMP.(WET) 23.1 C AIR TEMP.(DRY) 24.5 C
 RELATIVE HUMIDITY 88 0/0 BAROMETER 760 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SIG
						PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M2	PROD MG/M2	PROD MG/M2	PROD MG/M2			
2416	0	100.0	1	0			437	607			267					1
2416	.6	50.0	0	0												1
2416	1.5	14.6	0	0												1
2416	3.7	1.0	-0	-0												1

INTEGRATED HIGH PRODUCTIVITY 0
 INTEGRATED MEAN PRODUCTIVITY 0

STANDARD DEVIATIONS
 .26 .56 .56 216

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. MG/M3

-170 0 0 0
 STANDARD DEVIATIONS
 .50 0

GULF OF GUAYAQUIL CRUISE 6409 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 5 MAR 1964
 TIME 0636- WEATHER CLOUD COVER 10/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH 15.0 M SEA TEMP. 25.7 C AIR TEMP.(WET) 23.5 C AIR TEMP.(DRY) 25.6 C
 RELATIVE HUMIDITY 85 0/0 BAROMETER 760 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS PROD MG/M3	E.Z. NET(24)		GROSS PROD MG/M2	SLO
						PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M3					
0	100.0	0	0	0	0	-1	-59	57					0	
	50.0	0	0	0									0	
	14.6	0	0	0									0	
	1.0	0	0	0									0	

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

0
0

461

-3894

STANDARD DEVIATIONS
 .04 .08 .08

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

0
0
0

58
STANDARD DEVIATIONS
 .07

GULF OF GUAYAQUIL CRUISE 6409 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 6 MAR 1964
 TIME 0733- WEATHER CLOUD COVER 10/10 WIND VELOCITY 1KT (.5 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH 6.0 M SEA TEMP. 25.5 C AIR TEMP.(WET) 24.0 C AIR TEMP.(DRY) 26.5 C
 RELATIVE HUMIDITY 81 0/0 BAROMETER 760 MM TIDE EBBING 7/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z.		NET(12) PROD MG/M3	NET(24)		GROSS PROD MG/M3	E.Z.		SIG
					PROD MG/M2	PROD MG/M2		PROD MG/M2	PROD MG/M2		PROD MG/M2	PROD MG/M2	
2428	0	100.0	119	59			348	327		369			1
2428	2.5	50.0	83	82									1
2428	6.5	14.6	0	0									1
2428	15.0	1.0	0	0									1

INTEGRATED HIGH PRODUCTIVITY 291
 INTEGRATED MEAN PRODUCTIVITY 69

STANDARD DEVIATIONS
 .10 .11 .11
 563 1193

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER SFC AMOUNT MG/M3
			C14/02 PER 02 PROD	C14/02 SFC AMOUNT MG/M3	
21	0	0	0	0	0
STANDARD DEVIATIONS .03	0				

GULF OF GUAYAQUIL CRUISE 6409 STATION 7- 0 LAT. 03 08.0 S LONG. 80 51.0 W DATE 8 MAR 1964
 TIME 0706- WEATHER CLOUD COVER 10/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH 18.0 M SEA TEMP. 24.9 C AIR TEMP.(WET) 23.5 C AIR TEMP.(DRY) 25.6 C
 RELATIVE HUMIDITY 85 0/0 BAROMETER 759 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		GROSS		SLO
						PROD	MG/M3	PROD	MG/M3	PROD	MG/M3	PROD	MG/M2	PROD	MG/M2	
	0	100.0	0	0			74		89		59					0
		50.0	0	0												0
		14.6	0	0												0
		1.0	0	0												0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

0
 0
 STANDARD DEVIATIONS
 .05 .08 .08

1939 572

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

-15
 STANDARD DEVIATIONS
 .06

0 0 0

GULF OF GUAYAQUIL CRUISE 6410 STATION V-1 LAT. 02 34.0 S LONG. 80 06.5 W DATE 11 MAR 1964
 TIME 2011- WEATHER CLOUD COVER WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 95-105 T
 SECCHI DISK DEPTH 1.2 M SEA TEMP. 28.5 C AIR TEMP.(WET) 23.0 C AIR TEMP.(DRY) 25.1 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 760 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		E.Z. NET(24)		E.Z. GROSS PROD MG/M2	SIG
						PROD MG/M3	GROSS PROD MG/M3	PROD MG/M3	GROSS PROD MG/M3	PROD MG/M2	GROSS PROD MG/M2		
2439	0	100.0	81	68		116	-171	403				1	
2439	.5	50.0	78	78								1	
2439	1.2	14.6	38	33								1	
2439	2.5	1.0	1	1								1	

INTEGRATED HIGH PRODUCTIVITY 93 1
 INTEGRATED MEAN PRODUCTIVITY 194 1

STANDARD DEVIATIONS
 .06 .12 .12
 -1463 260

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/O2 PER O2 PROD	SFC AMOUNT MG/M3
287	0	0	0	0
STANDARD DEVIATIONS				
.11	0			

GULF OF GUAYAQUIL CRUISE 6410 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 13 MAR 1964
 TIME 0653- WEATHER 51 CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 26.1 C AIR TEMP.(WET) 22.6 C AIR TEMP.(DRY) 24.5 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 761 MM TIDE FLOODING, -2/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M2	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	E.Z. GROSS PROD MG/M2	SIG
2452	0	100.0	132	63		652	680	625			1
2452	.5	50.0	182	182							1
2452	1.2	14.6	52	45							1
2452	2.5	1.0	2	2							1

INTEGRATED HIGH PRODUCTIVITY 406
 INTEGRATED MEAN PRODUCTIVITY 331

STANDARD DEVIATIONS
 .14 .39 .39

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3
 -28 264
 STANDARD DEVIATIONS
 .37 .08

-9.53

GULF OF GUAYAQUIL CRUISE 6410 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 14 MAR 1964
 TIME 0641- WEATHER CLOUD COVER 9/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 25.2 C AIR TEMP.(WET) 24.9 C AIR TEMP.(DRY) 25.9 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 760 MM TIDE FLOODING, -2/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z. NET(24) PROD MG/M2	GROSS PROD MG/M2	SIG
2463	0	100.0	135	131		489	565	412			1
2463	.6	50.0	93	86							1
2463	1.5	14.6	52	49							1
2463	3.7	1.0	1	0							1

INTEGRATED HIGH PRODUCTIVITY 161
 INTEGRATED MEAN PRODUCTIVITY 149

STANDARD DEVIATIONS
 .13 .34 .34

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED C14/02 PER 02 PROD	MATTER SFC AMOUNT MG/M3	204
-76	362	-4.74	49.60		
STANDARD DEVIATIONS .32					

GULF OF GUAYAQUIL CRUISE 6411 STATION V-2 LAT. 02 34.0 S LONG. 80 06.5 W DATE 1 APR 1964
 TIME 0630- WEATHER CLOUD COVER 9/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH .5 M SEA TEMP. 29.4 C AIR TEMP.(WET) 23.8 C AIR TEMP.(DRY) 25.1 C
 RELATIVE HUMIDITY 88 0/0 BAROMETER 761 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS PROD MG/M3	E.Z. NET(24)		GROSS PROD MG/M2	SIG
						PROD MG/M3	PROD MG/M3	PROD MG/M3	PROD MG/M3		PROD MG/M2	PROD MG/M2		
0	0	100.0	0	0	0	1864	3694	34					0	
		50.0	0	0									0	
		14.6	0	0									0	
		1.0	0	0									0	

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

0
0

STANDARD DEVIATIONS
 .08 .10 .10

4585

9

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP.
 MG/M3

-1830
 STANDARD DEVIATIONS
 .06

.01

0

0

GULF OF GUAYAQUIL CRUISE 6411 STATION F-2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 2 APR 1964
 TIME 0643- WEATHER CLOUD COVER 4/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 105-115 T
 SECCHI DISK DEPTH 5.0 M SEA TEMP. 27.1 C AIR TEMP.(WET) 23.9 C AIR TEMP.(DRY) 25.1 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 759 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z. NET(24)		E.Z. GROSS	
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	PROD MG/M2	MG/M2
0		100.0	0	0		258	189	327							
		50.0	0	0											0
		14.6	0	0											0
		1.0	0	0											0

INTEGRATED HIGH PRODUCTIVITY 0
 INTEGRATED MEAN PRODUCTIVITY 0

STANDARD DEVIATIONS
 .11 .14 .14
 -841 878

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED MATTER	
			C14/02 PER 02 PROD	SFC AMOUNT MG/M3
69	48	.70	0	0

STANDARD DEVIATIONS
 .09 .02

GULF OF GUAYAQUIL CRUISE 6411 STATION P-2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 3 APR 1964
 TIME 0643- WEATHER CLOUD COVER 9/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 26.0 C AIR TEMP.(WET) 22.9 C AIR TEMP.(DRY) 25.5 C
 RELATIVE HUMIDITY 81 0/0 BAROMETER 759 MM

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12) PROD MG/M3	NET(24) PROD MG/M3	GROSS PROD MG/M3	E.Z.		SIG
									NET(24) PROD MG/M2	GROSS PROD MG/M2	
	0	100.0	0	0		243	147	338			0
		50.0	0	0							0
		14.6	0	0							0
		1.0	0	0							0

INTEGRATED HIGH PRODUCTIVITY
 INTEGRATED MEAN PRODUCTIVITY

0
 0
 STANDARD DEVIATIONS
 .17 .18 .18
 -592 364

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

96 64
 STANDARD DEVIATIONS .67
 .08 .05

GULF OF GUAYAQUIL CRUISE 6412 STATION 3- 0 LAT. 02 46.0 S LONG. 80 35.0 W DATE 8 APR 1964
 TIME 0734- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 205-215 T
 SECCHI DISK DEPTH 14.0 M SEA TEMP. 27.6 C AIR TEMP.(WET) 24.0 C AIR TEMP.(DRY) 26.9 C
 RELATIVE HUMIDITY 78 0/0 BAROMETER 761 MM TIDE EBBING 0/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	MG/M2	
2475	0	100.0	39	21		26	-35				86			1
2475	5.5	50.0	2	1										1
2475	14.5	14.6	8	6										1
2475	28.0	1.0	1	1										1

INTEGRATED HIGH PRODUCTIVITY 106
 INTEGRATED MEAN PRODUCTIVITY 66

STANDARD DEVIATIONS
 .05 .06 .06
 -3602 650

SFC DAY RESP. MG/M3	SFC NIGHT RESP. MG/M3	DAY/NIGHT	SECRETED		MATTER SFC AMOUNT MG/M3
			C14/02 PER 02 PROD	0	
61	0	0	0	0	0
STANDARD DEVIATIONS .03	0				

GULF OF GUAYAQUIL CRUISE 6412 STATION 15- 0 LAT. 03 23.0 S LONG. 80 35.0 W DATE 9 APR 1964
 TIME 0712- WEATHER CLOUD COVER 10/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 105-115 T
 SECCHI DISK DEPTH 12.0 M SEA TEMP. 27.5 C AIR TEMP.(WET) 23.8 C AIR TEMP.(DRY) 27.0 C
 RELATIVE HUMIDITY 78 0/0 BAROMETER 763 MM TIDE FLOODING, -9/10

SAMPLE NUMBER	DEPTH M	O/O INCUB LIGHT	HIGH PROD MG/M3	MEAN PROD MG/M3	E.Z. PROD MG/M2	NET(12)		NET(24)		GROSS		E.Z.		SIG
						PROD MG/M3	MG/M3	PROD MG/M3	MG/M3	PROD MG/M2	NET(24) PROD MG/M2	GROSS PROD MG/M2		
2487	0	100.0	109	66		52		22		83				1
2487	4.5	50.0	3	3										1
2487	12.5	14.6	3	2										1
2487	30.0	1.0	0	0										1

INTEGRATED HIGH PRODUCTIVITY 178
 INTEGRATED MEAN PRODUCTIVITY 122

STANDARD DEVIATIONS
 .07 .08 .08
 -1288 534

SECRETED MATTER
 C14/02 SFC
 PER 02 AMOUNT
 PROD MG/M3

SFC DAY SFC NIGHT DAY/NIGHT
 RESP. RESP.
 MG/M3 MG/M3

30 0 0
 STANDARD DEVIATIONS
 .05 0

GULF OF GUAYAQUIL
STATION POSITIONS

<u>Outer estuary</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Description</u>
1	2° 36' S	80° 51' W	
2	2 41 S	80 43 W	
3	2 46 S	80 35 W	
4	2 52 S	80 27 W	
5	2 56 S	80 51 W	
6	3 08 S	80 39 W	
7	3 08 S	80 51 W	
8	3 08 S	80 43 W	
9	3 08 S	80 35 W	
10	3 08 S	80 27 W	
11	3 21 S	80 51 W	
12	3 12 S	80 39 W	
13	3 34 S	80 51 W	
14	3 29 S	80 43 W	
15	3 23 S	80 35 W	
16	3 18 S	80 27 W	
17	3 15 S	80 21 W	
18	3 09 S	80 21 W	
19	3 08 S	81 17 W	
<u>Inner estuary</u>			
A	2°44.2'S	80°11.5'W	Los farallones
B	2 42.4 S	80 11.5 W	Frente Isla Zapatero
C	2 40.8 S	80 07.4 W	Aguas Piedras
D	2 40.0 S	80 02.3 W	Punta Cascajal
E	2 41.6 S	79 58.8 W	Punta Carmelo
F	2 44.3 S	79 54.0 W	Punta Mandinga
G	2 45.5 S	79 51.8 W	
H	2 46.4 S	79 50.0 W	Boca Jagua
I	2 53.2 S	79 55.2 W	Boya del Banco Ormala
J	3 03.3 S	79 54.8 W	Boca del Estero de Santa Rosa
K	3 02.1 S	79 57.2 W	
L	3 00.2 S	80 00.5 W	
M	2 58.3 S	80 03.5 W	Boca Puna Vieja
N	3 02.9 S	80 07.0 W	Punta Jambeli
O	3 05.8 S	80 05.5 W	
P	3 08.6 S	80 04.0 W	
Q	3 11.9 S	80 16.3 W	Punta Jambeli
R	3 15.5 S	80 16.3 W	Punta Payana
S	3 11.9 S	80 16.3 W	
T	3 08.6 S	80 16.3 W	
U	3 05.3 S	80 16.3 W	Punta Salinas
V	2 34.0 S	80 06.5 W	

GULF OF GUAYAQUIL CRUISE 6206
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
U-1	MAR 9	1650	0		472
Q-1	MAR 10	0550	0		158
K-1	MAR 10	0703	0		247
I-1	MAR 10	0817	0		195
F-1	MAR 10	0944	0		132
E-1	MAR 10	1038	0		68

GULF OF GUAYAQUIL CRUISE 6207
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
16-1	MAR 13	1040	0		169
13-1	MAR 14	1150	0		60
4-1	MAR 15	1045	0		168
10-1	MAR 20	1455	0		108

GULF OF GUAYAQUIL CRUISE 6208
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	MAR 22	0730	3	478	
V-2	MAR 22	0730	0	9	
B-1	MAR 22	1104	0		3
D-1	MAR 22	1310	0		3
G-1	MAR 23	0643	0		12
OP-1	MAR 24	0614	0		40
OP-2	MAR 24	0640	0	729	
K-1	MAR 24	0754	0		7
K-2	MAR 24	0815	0	275	
I-1	MAR 24	1020	0	100	
I-2	MAR 24	1055	0		2
F-1	MAR 24	1315	0	82	
F-2	MAR 24	1315	3	1610	
F-3	MAR 24	1350	0		4

GULF OF GUAYAQUIL CRUISE 6209
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
P-1	APR 5	0630	0		6
F-1	APR 5	1210	0		123

GULF OF GUAYAQUIL CRUISE 6210
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
3-1	APR 10	0615	0		495
15-1	APR 11	0705	0		455
15-2	APR 11	0730	15	2923	
7-1	APR 13	0430	0		144
5-1	APR 13	0730	0	1680	
5-2	APR 13	0810	0		141

GULF OF GUAYAQUIL CRUISE 6211
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3

V-1	APR 24	0742	0		66
P-1	APR 26	1400	0		191
L-1	APR 26	1535	0		45

GULF OF GUAYAQUIL CRUISE 6212
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3

C-1	MAY 8	1335	0		2
R-1	MAY 10	0850	0		772
U-1	MAY 10	1128	0		45
N-1	MAY 10	1345	0		67
M-1	MAY 10	1500	0		33
F-1	MAY 10	1725	0		176

GULF OF GUAYAQUIL CRUISE 6213
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3

15-1	MAY 15	0615	0		496
10-1	MAY 15	1200	0		281
3-1	MAY 16	0635	0		464
13-1	MAY 18	0045	0		339
7-1	MAY 18	0520	0		20

GULF OF GUAYAQUIL CRUISE 6214
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3

V-1	MAY 30	0615	0		256
F-1	MAY 31	0600	0		6
U-1	JUN 1	1028	0		21
N-1	JUN 1	1210	0		15
M-1	JUN 1	1315	0		110
F-1	JUN 1	1505	0		86

GULF OF GUAYAQUIL CRUISE 6216
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3

S-1	JUN 13	0902	0		148
U-1	JUN 13	1052	0		67
Q-1	JUN 13	1305	0		129

GULF OF GUAYAQUIL CRUISE 6217
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3

10-1	JUN 20	1105	0		83
16-1	JUN 20	1432	0		354
13-1	JUN 21	0055	0		296

GULF OF GUAYAQUIL CRUISE 6219
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	JUL	4 0610	5	513	
B-1	JUL	4 1025	0		5
F-1	JUL	4 1405	0		37
I-1	JUL	5 0930	0		33
Q-1	JUL	6 0615	0		1227
R-1	JUL	6 0932	0		182

GULF OF GUAYAQUIL CRUISE 6221
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	JUL	23 0642	0		890
Q-1	JUL	24 0450	0		104

GULF OF GUAYAQUIL CRUISE 6222
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
3-1	JUL	25 0630	0		310
3-2	JUL	25 0730	0	1727	
3-3	JUL	25 0740	10	5709	
15-1	JUL	26 0645	0		468
15-1	JUL	26 0715	30	1916	
10-1	JUL	26 1145	0		334
13-1	JUL	27 2330	0		429
7-1	JUL	28 0630	0		241
7-2	JUL	28 0700	30	827	
2-1	JUL	28 1225	0		31

GULF OF GUAYAQUIL CRUISE 6223
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	AUG	1 0600	0		46
F-1	AUG	1 1715	0		11
P-1	AUG	2 1245	0		83

GULF OF GUAYAQUIL CRUISE 6225
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
3-1	AUG	14 0642	0		267
1-1	AUG	14 0940	0		202
10-1	AUG	14 1525	0		317
7-1	AUG	15 0904	0		237
11-1	AUG	15 1125	30	2081	
11-2	AUG	15 1200	0	2249	
13-1	AUG	15 1320	0		23
15-1	AUG	16 0700	0		123
15-2	AUG	16 0715	30	351	
15-3	AUG	16 0750	0	2341	
P-1	AUG	16 1210	0		52

GULF OF GUAYAQUIL CRUISE 6226
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
A-1	OCT	3 1024	0		165
A-2	OCT	3 1115	0		92
V-1	OCT	3 1510	0		58
V-2	OCT	4 0625	0		32
V-3	OCT	4 0712	5	107	
V-4	OCT	4 1015	0		17
V-5	OCT	4 1225	0		53
P-1	OCT	5 0520	0	436	
P-2	OCT	5 0530	0	254	

GULF OF GUAYAQUIL CRUISE 6227
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
3-1	OCT	16 0905	0		6
15-1	OCT	17 0807	0		15
15-2	OCT	17 0912	0	154	
10-1	OCT	17 1521	0		64
5-1	OCT	19 0900	0		108
1-1	OCT	19 1107	0		17

GULF OF GUAYAQUIL CRUISE 6228
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	OCT	30 0710	0	67	
V-2	OCT	30 0710	5	389	
V-3	OCT	30 0750	0		49
F-1	OCT	31 0613	0	19	
F-1	OCT	31 0613	5	120	
P-1	NOV	1 0611	0	75	
P-2	NOV	1 0650	0		107

GULF OF GUAYAQUIL CRUISE 6229
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	NOV	14 0725	5	271	
V-2	NOV	14 0805	0		20
F-1	NOV	14 1555	0		120
F-2	NOV	15 0705	0	788	
P-1	NOV	16 0655	0	105	
P-2	NOV	16 0655	0	1142	
P-3	NOV	16 0735	0		44

GULF OF GUAYAQUIL CRUISE 6230
DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
10-1	NOV 21	1610	0		104
10-1	NOV 22	0736	0		157
10-2	NOV 22	1235	0		4
7-1	NOV 23	0650	10	6	
7-2	NOV 23	0735	0		73
L-1	NOV 23	1245	0		100

GULF OF GUAYAQUIL CRUISE 6231
DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	NOV 28	0710	0	83	
V-2	NOV 28	0745	0		18
F-1	NOV 28	1540	5	4630	
F-2	NOV 29	0620	0		109
P-1	NOV 30	0636	0	489	
P-2	NOV 30	0636	5	500	
P-3	NOV 30	0705	0		38

GULF OF GUAYAQUIL CRUISE 6232
DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	DEC 11	0658	0	266	
V-2	DEC 11	0658	4	452	
V-3	DEC 11	0736	0		49
F-1	DEC 11	1506	0		51
F-1	DEC 12	0647	0	204	
F-2	DEC 12	0647	5	827	
P-1	DEC 13	0715	0	543	
P-2	DEC 13	0715	5	330	
P-3	DEC 13	0750	0		150

GULF OF GUAYAQUIL CRUISE 6233
DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
3-1	DEC 18	0728	0	1050	
3-2	DEC 18	0728	10	764	
3-3	DEC 18	0752	0		144
15-1	DEC 19	0634	0		238
15-2	DEC 19	0705	0	818	
15-3	DEC 19	0705	20	3080	
10-1	DEC 19	1226	0		95
7-1	DEC 21	0650	0	2307	
7-2	DEC 21	0650	30	4539	
7-3	DEC 21	0730	0		357
1-1	DEC 21	1200	0		23

GULF OF GUAYAQUIL CRUISE 6301
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	JAN	9 0743		486	
V-2	JAN	9 0743	5	978	
F-1	JAN	9 1625	0		552
F-2	JAN	10 0730	0	203	
F-3	JAN	10 0730	5	430	
P-1	JAN	11 0655	0	1206	
P-2	JAN	11 0655	0	3535	
P-3	JAN	11 0740	0		178

GULF OF GUAYAQUIL CRUISE 6302
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
4-1	JAN	16 0400	0		200
4-2	JAN	16 0400	0	1	
4-3	JAN	16 0400	10	390	
15-1	JAN	17 0750	0		100
15-2	JAN	17 0750	0	9	
15-3	JAN	17 0750	10	69	
10-1	JAN	17 1250	0		563
13-1	JAN	19 0100	0		799
F-1	JAN	19 0710	0		547
L-1	JAN	19 1200	0		28

GULF OF GUAYAQUIL CRUISE 6303
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	JAN	23 0650	0	159	
F-1	JAN	23 1618	0		53
F-2	JAN	24 0650	0	318	
F-3	JAN	24 0650	5	1476	
P-1	JAN	25 0644	0	597	
P-2	JAN	25 0644	5	1481	

GULF OF GUAYAQUIL CRUISE 6304
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	FEB	6 0700	5	1896	
V-2	FEB	6 0700	0	301	
V-3	FEB	6 0733	0		185
F-1	FEB	7 0635	0	475	
F-2	FEB	7 0635	5	1128	
P-1	FEB	8 0650	0	375	
P-1	FEB	8 0650	5	297	
P-2	FEB	8 0730	0		149

GULF OF GUAYAQUIL CRUISE 6305
DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
13-1	FEB 13	0110	0		117
7-1	FEB 13	0715	10	789	
7-2	FEB 13	0715	0	397	
7-3	FEB 13	0753	0		47
1-1	FEB 13	1227	0		532
3-1	FEB 14	0700	10	317	
3-2	FEB 14	0730	0		30
15-1	FEB 15	0635	0	61	
15-2	FEB 15	0635	10	70	
15-3	FEB 15	0709	0		612
10-1	FEB 15	1220	0		101

GULF OF GUAYAQUIL CRUISE 6306
DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	FEB 20	0635	5	1276	
V-2	FEB 20	0705	0	133	
V-3	FEB 20	0715	0		42
F-1	FEB 20	1530	0		16
F-2	FEB 21	0520	0	234	
F-3	FEB 21	0550	5	1227	
P-1	FEB 21	1650	0		348
P-2	FEB 22	0530	0	2645	
P-3	FEB 22	0530	0	4151	

GULF OF GUAYAQUIL CRUISE 6308
DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	MAR 13	0710	0	202	
V-2	MAR 13	0710	4	715	
V-3	MAR 13	0748	0		32
F-1	MAR 13	1635	0		60
F-2	MAR 14	0728	0	139	
F-3	MAR 14	0728	5	1600	
P-1	MAR 15	0648	0	722	
P-2	MAR 15	0648	5	1811	
P-3	MAR 15	0722	0		186

GULF OF GUAYAQUIL CRUISE 6309
DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
3-1	MAR 20	0655	10	45	
3-2	MAR 20	0655	0	2138	
3-3	MAR 20	0735	0		83
10-1	MAR 20	1455	0		108
15-1	MAR 21	0655	10	7398	
15-2	MAR 21	0725	0	1099	

GULF OF GUAYAQUIL CRUISE 6309
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
15-3	MAR 21	0725	0		462
10-1	MAR 21	1230	0		150
7-1	MAR 22	0655	10	1549	
7-2	MAR 22	0655	0	11376	
7-3	MAR 22	0750	0		2091
1-1	MAR 22	1205	0		72

GULF OF GUAYAQUIL CRUISE 6310
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	MAR 27	0710	0	291	
V-2	MAR 27	0710	3	1510	
V-3	MAR 27	0750	0		16
F-1	MAR 28	0642	0	275	
F-2	MAR 28	0720	0		77
P-2	MAR 29	0700	0	1334	
P-2	MAR 29	0700	5	3821	
P-3	MAR 29	0735	0		118

GULF OF GUAYAQUIL CRUISE 6311
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	APR 17	1045	0		22
F-1	APR 18	0810	0		9

GULF OF GUAYAQUIL CRUISE 6312
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
3-1	MAY 1	0646	10	2734	
3-2	MAY 1	0729	0		451
10-1	MAY 1	1600	0		94
15-1	MAY 2	0650	10	3212	
15-2	MAY 2	0650	0	667	
15-3	MAY 2	0725	0		572
10-1	MAY 2	1225	0		106
13-1	MAY 4	0120	0		434
7-1	MAY 4	0650	10	1018	
7-2	MAY 4	0740	0		10
1-1	MAY 4	1145	0		78

GULF OF GUAYAQUIL CRUISE 6313
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	MAY 8	0720	0	1859	
V-2	MAY 8	0720	4	1763	
V-3	MAY 8	0738	0		20

GULF OF GUAYAQUIL CRUISE 6313
DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3

F-1	MAY	9	0705	0	1677
F-2	MAY	9	0705	5	2455
F-3	MAY	9	0740	0	48
P-1	MAY	10	0652	0	3180
P-2	MAY	10	0652	5	2865
P-3	MAY	10	0727	0	194

GULF OF GUAYAQUIL CRUISE 6314
DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3

V-1	MAY	21	0734	0	182
F-1	MAY	22	0738	0	37
P-1	MAY	23	0530	0	409
P-2	MAY	23	0620	0	4318
P-3	MAY	23	0620	5	5891

GULF OF GUAYAQUIL CRUISE 6315
DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3

3-1	MAY	29	0649	10	1837
3-2	MAY	29	0735	0	240
10-1	MAY	29	1327	0	283
15-1	MAY	30	0730	0	172
10-1	MAY	30	1240	0	1353
13-1	MAY	31	0025	0	1302
7-1	MAY	31	0745	0	65

GULF OF GUAYAQUIL CRUISE 6316
DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3

V-1	JUN	5	0735	5	1971
V-2	JUN	5	0810	0	117
F-1	JUN	6	0714	0	2752
F-2	JUN	6	0750	0	58
P-1	JUN	7	0755	0	79

GULF OF GUAYAQUIL CRUISE 6317
DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3

F-1	JUN	20	0734	0	105
P-1	JUN	21	0700	0	2490
P-2	JUN	21	0741	0	89

GULF OF GUAYAQUIL CRUISE 6318
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
3-2	JUN 26	0725	0		42
10-2	JUN 26	1500	0		36
15-1	JUN 27	0655	0	77	
15-2	JUN 27	0730	0		19
10-1	JUN 27	1241	0		102
7-1	JUN 28	0800	0		230
1-1	JUN 28	1335	0		362

GULF OF GUAYAQUIL CRUISE 6319
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	JUL 3	0725	0		44
F-1	JUL 4	0740	0		49
P-1	JUL 5	0708	0	1827	
P-2	JUL 5	0745	0		62

GULF OF GUAYAQUIL CRUISE 6320
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
F-1	JUL 16	0745	0		20
P-1	JUL 17	0755	0		47

GULF OF GUAYAQUIL CRUISE 6321
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
3-1	JUL 31	0735	0	382	
3-2	JUL 31	0810	0		201
10-1	JUL 31	1345	0		386
15-1	AUG 1	0730	10	5446	
15-2	AUG 1	0805	0		410
7-1	AUG 3	0740	0	837	
7-2	AUG 3	0740	10	922	
7-3	AUG 3	0815	0		267
1-1	AUG 3	1243	0		49

GULF OF GUAYAQUIL CRUISE 6322
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	AUG 7	0715	0	454	
V-2	AUG 7	0750	0		21
F-1	AUG 8	0655	0	2621	
F-2	AUG 8	0730	0		55
P-1	AUG 9	0636	0	1855	
P-2	AUG 9	0710	0		34

GULF OF GUAYAQUIL CRUISE 6323
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	AUG 28	0710	0	1676	
V-2	AUG 28	0745	0		22
F-1	AUG 29	0651	0	1206	
P-1	AUG 30	0650	0	6038	
P-2	AUG 30	0731	0		52

GULF OF GUAYAQUIL CRUISE 6324
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
3-1	SEP 11	0700	0	2428	
3-2	SEP 11	0700	10	2483	
3-3	SEP 11	0735	0		259
1-1	SEP 11	1104	0		189
10-1	SEP 12	1217	0		48
15-1	SEP 13	0750	0		99
13-1	SEP 13	1140	0		576
7-1	SEP 14	0640	0		201
7-2	SEP 14	0710	0	1960	
19-1	SEP 14	1510	0		716

GULF OF GUAYAQUIL CRUISE 6325
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	SEP 18	0650	0	1593	
V-2	SEP 18	0730	0		20
F-1	SEP 19	0646	5	279	
F-2	SEP 19	0725	0		55
P-1	SEP 20	0635	0	121	
P-2	SEP 20	0715	0		23

GULF OF GUAYAQUIL CRUISE 6326
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	OCT 2	0635	5	1141	
V-2	OCT 2	0720	0		26
F-1	OCT 3	0644	5	820	
F-2	OCT 3	0730	0		31
P-1	OCT 4	0720	0		97

GULF OF GUAYAQUIL CRUISE 6327
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
3-1	OCT 9	0650	20	651	
3-2	OCT 9	0740	0		87
1-1	OCT 9	1135	0		87
15-1	OCT 10	0625	0	3561	

GULF OF GUAYAQUIL CRUISE 6327
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
15-2	OCT 10	0725	0		344
10-1	OCT 10	1335	0		39
7-1	OCT 11	0748	0		194
19-1	OCT 11	1420	0		152

GULF OF GUAYAQUIL CRUISE 6328
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
P-1	OCT 25	0610	5	1740	
P-2	OCT 25	0650	0		30

GULF OF GUAYAQUIL CRUISE 6329
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
3-1	NOV 6	0625	0		799
3-2	NOV 6	0730	20	574	
15-1	NOV 7	0615	20	2662	
10-1	NOV 7	1430	0		144
19-1	NOV 8	1400	0		182

GULF OF GUAYAQUIL CRUISE 6330
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	NOV 13	0640	0		33
F-1	NOV 14	0645	0		26
P-1	NOV 15	0640	0		84

GULF OF GUAYAQUIL CRUISE 6333
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	DEC 4	0653	0	813	
V-2	DEC 4	0653	5	1424	
V-3	DEC 4	0730	0		38
P-1	DEC 6	0712	0	1066	

GULF OF GUAYAQUIL CRUISE 6334
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
3-1	DEC 11	0715	0	612	
3-2	DEC 11	0715	20	1170	
3-3	DEC 11	0750	0		10
1-1	DEC 11	1123	0		18
15-1	DEC 12	0655	20	673	
15-2	DEC 12	0735	0		271
10-1	DEC 12	1345	0		71
7-1	DEC 13	0745	0		29

GULF OF GUAYAQUIL CRUISE 6335
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	DEC 18	0640	5	44	
V-2	DEC 18	0640	0	36	
V-3	DEC 18	0715	0		34
F-1	DEC 19	0640	5	1835	
F-2	DEC 19	0718	0		24
P-1	DEC 20	0650	0	3616	

GULF OF GUAYAQUIL CRUISE 6401
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	JAN 8	0710	0	1075	
V-2	JAN 8	0710	5	1681	
V-3	JAN 8	0757	0		19
F-1	JAN 9	0705	0	743	
F-2	JAN 9	0705	5	1950	
F-3	JAN 9	0741	0		22
P-1	JAN 10	0701	0	252	
P-2	JAN 10	0701	5	1932	
P-3	JAN 10	0736	0		41

GULF OF GUAYAQUIL CRUISE 6402
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
3-1	JAN 15	0645	0	2475	
1-1	JAN 15	1110	0		276
15-1	JAN 16	0730	0	582	
15-2	JAN 16	0730	20	1060	
10-1	JAN 16	1405	0		21
7-1	JAN 17	0725	0		480

GULF OF GUAYAQUIL CRUISE 6403
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	JAN 23	0715	5	985	
F-1	JAN 24	0640	0	5559	
F-2	JAN 24	0715	0		13
P-1	JAN 25	0651	0	3001	
P-2	JAN 25	0651	5	632	
P-3	JAN 25	0730	0		358

GULF OF GUAYAQUIL CRUISE 6404
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	FEB	5 0700	5	322	
F-1	FEB	6 0645	0	14	
F-2	FEB	6 0645	5	61	
P-1	FEB	7 0625	0	914	
P-2	FEB	7 0625	5	996	
P-3	FEB	7 0700	0		155

GULF OF GUAYAQUIL CRUISE 6405
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
3-1	FEB	10 0730	0	1620	
3-2	FEB	10 0730	10	3464	
3-3	FEB	10 0820	0		263
15-2	FEB	11 0735	0		287
10-1	FEB	11 1420	0		219
7-1	FEB	12 0650	0	1018	
7-2	FEB	12 0650	10	1255	
7-3	FEB	12 0750	0		194

GULF OF GUAYAQUIL CRUISE 6408
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	FEB	28 0700	0	426	
V-2	FEB	28 0700	5	330	
V-3	FEB	28 0740	0		31
F-1	FEB	29 0700	0	282	
F-2	FEB	29 0700	5	524	
P-1	MAR	1 0650	0	829	
P-2	MAR	1 0650	5	2122	
P-3	MAR	1 0720	0		599

GULF OF GUAYAQUIL CRUISE 6409
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
3-1	MAR	5 0650	0	566	
3-2	MAR	5 0650	10	1196	
3-3	MAR	5 0732	0		233
15-1	MAR	6 0740	0		201
7-1	MAR	8 0750	10	3326	

GULF OF GUAYAQUIL CRUISE 6410
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3
V-1	MAR	12 0710	0	634	
F-1	MAR	13 0700	0	126	
F-2	MAR	13 0700	5	504	
P-1	MAR	14 0655	0		520

GULF OF GUAYAQUIL CRUISE 6411
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3

V-1	APR	1	0638	5	448
V-2	APR	1	0725	0	22
F-1	APR	2	0650	0	540

GULF OF GUAYAQUIL CRUISE 6411
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3

F-2	APR	2	0650	5	260
F-3	APR	2	0725	0	217
P-1	APR	3	0655	0	751
P-2	APR	3	0655	5	2709
P-3	APR	3	0730	0	126

GULF OF GUAYAQUIL CRUISE 6412
 DETERMINATIONS OF PLANKTON CONCENTRATION

STATION	DATE	TIME	DEPTH	C.B.TOW	1/2M NET TOW
		HR	M		ML/1000M3

3-1	APR	8	0750	0	1403
3-1	APR	8	0835	0	191
1-1	APR	8	1220	0	28
15-1	APR	9	0725	0	5084
15-2	APR	9	0805	0	1058
10-1	APR	9	1445	0	174

GULF OF GUAYAQUIL CRUISE 6216				*PIGMENT DATA*	
STATION	CHLORO-A	CHLORO-B	CHLORO-C	AST CARO	NON-AST CARO
	I-----	MG/M3	-----I	I--	MSPC/M3 --I
V	0.0 4.082	0.921	9.196	1.103	.000
F	0.0 2.368	0.436	4.951	.502	.212
Q	0.0 6.103	.646	9.497	1.343	.706
T	0.0 2.458	.054	3.529	.376	.408

GULF OF GUAYAQUIL CRUISE 6219				*PIGMENT DATA*	
* PUNA	* 5.008	1.201	7.962	1.276	0.395
*	* 6.288	1.700	1.245	1.898	0.176
*	* 5.788	1.619	13.722	1.954	0.175
*LAGOON	* 5.482	1.792	11.195	2.004	0.000
V	0.0 9.159	3.724	28.726	2.964	.000
V	0.410.104	3.498	22.667	3.410	.000
V	0.811.779	2.841	24.733	3.164	.212
V	2.010.569	1.723	18.572	3.446	.184
F	0.0 7.686	.000	14.019	2.411	1.346
F	0.3 7.748	1.416	14.540	2.174	1.020
F	0.5 9.408	1.488	14.778	2.656	.756
F	1.210.349	1.716	15.332	3.566	.474
Q	0.0 3.630	.228	3.588	.796	.760
Q	0.6 3.702	.230	4.648	.701	.932
Q	1.5 3.876	.263	4.791	.653	1.024
Q	3.7 4.103	.166	4.266	.737	1.018

GULF OF GUAYAQUIL CRUISE 6221				*PIGMENT DATA*	
V	0.0 6.464	1.034	10.198	1.467	.653
V	0.5 7.001	1.458	11.548	1.986	.262
V	1.2 6.394	.624	25.942	1.851	.192
V	2.5 4.075	.017	7.054	.684	1.397
P	0.0 3.844	.678	7.856	1.082	.211
P	0.6 5.501	.934	9.986	1.082	.558
P	1.5 4.404	.310	5.561	.766	.648
P	3.7 3.969	.538	.793	1.143	.742

GULF OF GUAYAQUIL CRUISE 6222				*PIGMENT DATA*	
3	0.0 .646	.316	3.362	.764	.000
3	3.0 1.008	.611	5.072	1.000	.000
3	11.0 .246	.442	2.426	.122	.316
3	15.0 3.181	1.111	9.233	.975	.000
15	0.0 4.540	.444	6.102	1.464	.145
15	2.5 3.474	.530	5.785	1.114	.220
15	6.5 4.486	.162	6.509	.884	.671
15	13.0 4.340	.134	6.422	.498	.777
7	0.0 3.485	.722	8.498	1.312	.290
7	2.5 4.170	.806	7.352	1.714	.000

GULF OF GUAYAQUIL CRUISE 6222					*PIGMENT DATA*		
STATION			CHLORO-A	CHLORO-B	CHLORO-C	AST CARD	NGN-AST CARD
I-----			MG/M3	-----I			I-- MSPU/M3 --I
7	6.5	3.160	1.000	6.622	.954	.336	
7	13.0	3.137	1.316	10.656	1.277	.136	

GULF OF GUAYAQUIL CRUISE 6223					*PIGMENT DATA*	
V	0.0	12.136	.929	15.340	2.306	1.966
V	0.3	11.172	.676	11.592	2.962	.492
V	0.5	11.207	.000	14.461	1.868	1.740
F	0.0	9.161	1.222	16.181	2.082	2.122
F	0.3	11.196	1.697	15.778	2.119	1.615
F	0.5	6.514	.150	12.247	1.631	1.336
P	0.0	3.541	.826	9.933	1.270	.030
P	0.6	3.786	.285	4.677	.561	1.041
P	1.5	2.981	.950	8.704	1.174	.334

GULF OF GUAYAQUIL CRUISE 6225					*PIGMENT DATA*	
3	0.0	4.45	.126	7.285	.544	1.362
3	2.5	6.902	.000	7.977	1.500	1.996
3	5.5	7.478	.232	9.060	.101	1.062
3	10.0	8.259	.977	12.868	1.689	.106
9	0.0	3.222	1.363	9.810	1.408	.000
9	4.0	2.631	.816	8.068	1.176	.046
9	10.5	5.126	.000	6.168	.900	.414
9	25.0	2.989	.878	6.370	.910	.354
15	0.0	1.171	.754	6.216	1.035	1.664
15	4.0	2.258	1.149	9.384	1.300	.000
15	10.5	1.984	1.208	8.672	1.302	.000
15	25.0	1.941	1.110	9.556	1.071	.000

GULF OF GUAYAQUIL CRUISE 6401					*PIGMENT DATA*	
V	0.0	4.716	.558	5.360	.897	.103
F	0.0	1.864	.700	4.028	.604	.116
P	0.0	3.482	.363	3.926	.537	.591
A	0.0	.733	.412	1.149	.080	.154
B	0.0	3.356	1.151	8.846	.865	.450
C	0.0	19.169	12.900	12.662	.816	1.134
D	0.0	3.358	1.545	4.106	.273	.613
E	0.0	1.984	.503	2.471	.218	.478

GULF OF GUAYAQUIL CRUISE 6402					*PIGMENT DATA*	
3	0.0	.938	.404	3.445	.617	.000
15	0.0	3.076	2.622	18.397	1.751	.000
7	0.0	.966	.566	4.081	.594	.000

GULF OF GUAYAQUIL CRUISE 6403				*PIGMENT DATA*	
STATION	CHLORO-A	CHLORO-B	CHLORO-C	AST CARD	NON-AST CARD
	I-----	MG/M3	-----I	I--	MSPU/M3 --I
V	0.0 4.704	2.043	13.120	1.032	.311
F	0.0 1.263	.537	3.032	.616	.241
P	0.0 1.161	.576	3.697	.584	.046

GULF OF GUAYAQUIL CRUISE 6404				*PIGMENT DATA*	
V	0.0 1.083	.561	3.445	.515	.471
F	0.0 2.035	1.296	7.741	.463	.254
P	0.0 2.814	3.179	6.724	.900	.000

GULF OF GUAYAQUIL CRUISE 6405				*PIGMENT DATA*	
3	0.0 .506	.281	1.655	.356	.004
15	0.0 .856	.458	2.417	.452	.000
7	0.0 2.158	.317	2.488	.458	.468

GULF OF GUAYAQUIL CRUISE 6406				*PIGMENT DATA*	
1	0.0 .882	.474	2.842	.246	.144
8A	0.0 .322	.120	.926	.096	.136
20	0.0 .517	.128	.781	.118	.098
38	0.0 7.381	5.020	6.259	.176	2.151
41	0.0 .304	.076	.705	.156	.112

GULF OF GUAYAQUIL CRUISE 6408				*PIGMENT DATA*	
V	0.0 3.266	2.186	11.938	1.722	.000
F	0.0 7.175	1.167	7.234	1.234	.721
P	0.0 2.732	.876	5.271	.785	.004

GULF OF GUAYAQUIL CRUISE 6409				*PIGMENT DATA*	
3	0.0 .832	.596	3.936	.398	.000
15	0.0 .670	.314	2.374	.466	.000
7	0.0 .640	.484	2.495	.398	.000

GULF OF GUAYAQUIL CRUISE 6410				*PIGMENT DATA*	
V	0.0 .306	.902	5.862	.802	.000
F	0.0 5.215	.950	8.553	1.392	.298
P	0.0 2.888	.542	3.098	.585	.066

GULF OF GUAYAQUIL CRUISE 6412				*PIGMENT DATA*	
15	0.0 .614	.131	1.000	.243	.072

GULF OF GUAYAQUIL CRUISE 6101
TIME SERIES OF SURFACE TEMPERATURE-SALINITY
DATA COLLECTED BETWEEN STATIONS 1 AND 9 *R/V PINTA*

DATE	TIME	TEMP.	SAL.	SIG-T
	HRS.	DEG C	0/00	G/L
19 JULY	0615	18.80	27.18	19.13
19 JULY	0630	19.79		
19 JULY	0645	19.55	27.90	19.49
19 JULY	0700	19.65	27.79	19.39
19 JULY	0715	19.60	27.68	19.32
19 JULY	0730	19.80	27.48	19.11
19 JULY	0745	20.80	27.11	18.60
19 JULY	0800	20.80		
19 JULY	0815	20.80	27.30	18.74
19 JULY	0830	20.80		
19 JULY	0845	20.77	27.52	18.91
19 JULY	0900	20.78		
19 JULY	0915	20.78	27.32	18.75
19 JULY	0930	20.79		
19 JULY	0945	20.80	28.21	19.42
19 JULY	1000	20.85'		
19 JULY	1015	20.80	29.42	20.34
19 JULY	1030	20.80		
19 JULY	1215	30.201	29.11	
19 JULY	1230	30.201		
19 JULY	1245	31.101	30.26	
19 JULY	1300	30.451		
19 JULY	1315	30.451	32.18	
19 JULY	1330	30.401		
19 JULY	1345	30.401	32.59	
19 JULY	1400	30.201		
19 JULY	1415	30.251	32.41	
19 JULY	1430	30.401		
19 JULY	1445	30.251	32.75	
19 JULY	1500	30.251		
19 JULY	1515	30.201	32.79	
19 JULY	1530	31.101		
19 JULY	1545	31.101	32.79	
19 JULY	1600	31.101		
19 JULY	1615	31.101	32.70	
19 JULY	1630	31.101		
19 JULY	1645	31.101	32.56	
19 JULY	1700	31.101		
19 JULY	1715	31.101	32.63	
19 JULY	1730	31.101		
19 JULY	1745	31.101	31.89	
19 JULY	1800	31.101		
19 JULY	1815	31.101	31.89	
19 JULY	1830	31.101		
20 JULY	0715	22.8	31.89	21.66

GULF OF GUAYAQUIL CRUISE 6101
 TIME SERIES OF SURFACE TEMPERATURE-SALINITY
 DATA COLLECTED BETWEEN STATIONS 1 AND 9 *R/V PINTA*

DATE	TIME	TEMP.	SAL.	SIG-T
	HRS.	DEG C	0/00	G/L
20 JULY	0730	23.0		
20 JULY	0745	22.8	32.39	22.04
20 JULY	0800	22.8		
20 JULY	0815	23.0	32.09	21.75
20 JULY	0830	22.8		
20 JULY	0845	22.9	32.14	21.82
20 JULY	0900	22.9		
20 JULY	0915	22.8	31.78	21.58
20 JULY	0930	22.8		
20 JULY	0945	22.2	33.13	22.77
20 JULY	1000	22.0		
20 JULY	1015	22.2	32.63	22.39
20 JULY	1030	21.8		
20 JULY	1045	22.2	31.91	21.84
20 JULY	1100	22.4		
20 JULY	1115	22.42	31.51	21.47
20 JULY	1130	22.45		
20 JULY	1145	22.40	34.16	23.49
20 JULY	1200	22.85		
20 JULY	1215	22.85	29.56	19.88
20 JULY	1230	23.00		
20 JULY	1245	23.00	29.42	19.73
20 JULY	1300	22.90		
20 JULY	1315	22.85	29.61	19.92
20 JULY	1330	22.85		
20 JULY	1345	23.20	29.72	19.91
20 JULY	1400	23.45		
20 JULY	1415	22.78	29.51	19.87
20 JULY	1430	23.80		
20 JULY	1445	23.85	29.04	19.21
20 JULY	1500	23.20		
20 JULY	1515	23.80	28.13	18.54
20 JULY	1530	23.40		
20 JULY	1545	23.00	28.49	19.03
20 JULY	1600	23.80		
20 JULY	1615	23.85	27.98	18.41
20 JULY	1630	23.80		

GULF OF GUAYAQUIL CRUISE 6102
 TIME SERIES OF SURFACE TEMPERATURE-SALINITY
 DATA COLLECTED BETWEEN STATIONS 9 AND V*R/V PINTA*

DATE	TIME HRS.	TEMP. DEG C	SAL. 0/00	SIG-T G/L
31 AUG.	0700	20.95	30.43	21.06
31 AUG.	0730	23.45	29.94	20.00
31 AUG.	0800	23.40	30.12	20.15
31 AUG.	0830	23.21	29.99	20.10
31 AUG.	0900	23.22	30.05	20.14
31 AUG.	0930	23.23	30.32	20.35
31 AUG.	1000	23.60	30.26	20.20
31 AUG.	1030	23.78	30.72	20.49
31 AUG.	1100	24.10		
31 AUG.	1130	24.42	32.77	21.86
31 AUG.	1200	24.20	34.52	23.24
31 AUG.	1230	24.40	34.52	23.18
31 AUG.	1300	23.82	35.73	24.27
31 AUG.	1330	20.22	35.86	25.38
31 AUG.	1400	20.65	36.20	25.52
31 AUG.	1430	21.20	35.81	25.08
31 AUG.	1500	21.22	35.57	24.89
31 AUG.	1530	21.10	35.99	25.24
31 AUG.	1600	20.60	35.59	25.06
31 AUG.	1630	19.60	35.59	25.34
31 AUG.	1700	19.20	35.71	25.54
1 SEPT.	0700	18.95	35.61	25.52
1 SEPT.	0730	18.40	35.59	25.65
1 SEPT.	0800	18.20	35.41	25.55
1 SEPT.	0830	20.18	35.21	24.89
1 SEPT.	0900	20.42	34.40	24.22
1 SEPT.	0930	21.00	34.36	24.03
1 SEPT.	1000	21.00	33.82	23.62
1 SEPT.	1030	23.80	32.23	21.64
1 SEPT.	1100	23.24	28.93	19.31
1 SEPT.	1130	24.43	30.64	20.24
1 SEPT.	1200	24.95	31.29	20.58
1 SEPT.	1230	26.25	31.27	20.18
1 SEPT.	1300	25.00	31.53	20.75
1 SEPT.	1330	25.45	31.44	20.54
1 SEPT.	1400	27.10	31.27	19.91

GULF OF GUAYACUIL CRUISE 6103
 TIME SERIES OF NEAR-SURFACE TEMPERATURE-SALINITY
 DATA COLLECTED OFFSHORE FROM PLAYAS

DATE	TIME	DEPTH	TEMP.	SAL.	SIG-T
	HRS.	MTRS.	DEG C	0/00	G/L
7 SEPT.	1230	0.0	23.20	31.33	21.12
7 SEPT.	1230	3.0	24.58	31.58	20.91
7 SEPT.	1430	0.0	23.38	31.71	21.34
7 SEPT.	1430	3.0	24.58	31.65	20.96
7 SEPT.	1507	0.0	23.97	31.64	21.13
7 SEPT.	1507	3.0	24.34	31.49	20.91
7 SEPT.	1530	0.0	23.58	31.62	21.23
7 SEPT.	1530	3.0	24.31	31.60	21.01
7 SEPT.	1600	1.5	23.62	31.52	21.15
7 SEPT.	1600	3.0	23.91	31.64	21.15
8 SEPT.	0730	0.0	22.25	31.60	21.59
8 SEPT.	0730	2.0	22.35	31.42	21.43
8 SEPT.	0800	0.0	22.18	31.58	21.60
8 SEPT.	0800	2.0	22.28	31.56	22.56
8 SEPT.	0830	0.0	22.26	31.60	21.59
8 SEPT.	0830	2.0	22.48	31.49	21.45
8 SEPT.	0900	0.0	22.60	31.65	21.53
8 SEPT.	0900	2.0	22.49	31.62	21.54
8 SEPT.	0930	0.0	22.98	31.83	21.56
8 SEPT.	0930	2.0	22.36	31.65	21.60
8 SEPT.	1000	0.0	23.22	32.39	21.92
8 SEPT.	1000	2.0	23.18	32.01	21.64
8 SEPT.	1100	0.0	23.23	32.97	22.35
8 SEPT.	1100	2.0	23.49	33.10	22.38
8 SEPT.	1130	0.0	22.42	29.67	20.09
8 SEPT.	1130	2.0	23.50	29.60	19.73
8 SEPT.	1200	0.0	23.40	33.46	22.67
8 SEPT.	1200	2.0	23.96	33.31	22.40
13 SEPT.	0800	0.0	22.78		
13 SEPT.	0800	3.0	23.58		
13 SEPT.	0830	0.0	22.69		
13 SEPT.	0830	3.0	23.39		
13 SEPT.	0900	0.0	22.74		
13 SEPT.	0900	3.0	23.38		
13 SEPT.	0930	0.0	22.91		
13 SEPT.	0930	3.0	23.49		
13 SEPT.	1000	0.0	23.09		
13 SEPT.	1000	2.5	23.31		
13 SEPT.	1030	0.0	22.59		
13 SEPT.	1030	2.5	23.42		
13 SEPT.	1100	0.0	23.50		
13 SEPT.	1100	2.5	23.48		
13 SEPT.	1130	0.0	23.41		
13 SEPT.	1130	2.5	23.21		
13 SEPT.	1200	0.0	23.89		

GULF OF GUAYAQUIL CRUISE 6103
 TIME SERIES OF NEAR-SURFACE TEMPERATURE-SALINITY
 DATA COLLECTED OFFSHORE FROM PLAYAS

DATE	TIME	DEPTH	TEMP.	SAL.	SIG-T
	HRS.	MTRS.	DEG C	0/00	G/L
13 SEPT.	1200	2.0	23.82		
13 SEPT.	1230	0.0	23.53		
13 SEPT.	1230	2.0	23.89		
13 SEPT.	1300	0.0	23.84	32.18	21.58
13 SEPT.	1300	2.0	24.09		
13 SEPT.	1330	0.0	23.90	32.70	21.95
13 SEPT.	1330	2.0	23.99	32.59	21.84
13 SEPT.	1400	0.0	24.37	33.01	22.05
13 SEPT.	1400	2.0	24.49	32.88	21.92
13 SEPT.	1430	0.0	23.68	33.04	22.28
13 SEPT.	1430	2.0	24.42	33.03	22.05
13 SEPT.	1500	0.0	24.06	32.54	21.79
13 SEPT.	1500	2.0	24.64	32.75	21.77
13 SEPT.	1530	0.0	24.42	31.40	20.82
13 SEPT.	1530	2.0	25.08	31.69	20.84
13 SEPT.	1600	0.0	24.22	30.95	20.54
13 SEPT.	1600	2.5	24.69	30.93	20.39
13 SEPT.	1630	0.0	23.62	31.00	20.75
13 SEPT.	1630	2.5	23.99	30.95	20.61
13 SEPT.	1700	0.0	23.88	30.93	20.63
13 SEPT.	1700	3.0	24.50	30.95	20.46
13 SEPT.	1730	0.0	23.68	30.75	20.55
13 SEPT.	1730	3.0	24.09	30.93	20.57
13 SEPT.	1800	0.0	24.02	30.75	20.45
13 SEPT.	1800	3.0	24.18	30.79	20.43

GULF OF GUAYAQUIL CRUISE 6104
 TIME SERIES OF SURFACE TEMPERATURE
 DATA COLLECTED BETWEEN STA. 16-13

DATE	TIME HRS.	TEMP. DEG C	SAL. 0/00	SIG-T G/L
26 SEPT	1020	24.20		
26 SEPT	1030	25.18		
26 SEPT	1040	25.18		
26 SEPT	1050	25.39		
26 SEPT	1100	24.60		
26 SEPT	1110	25.30		
26 SEPT	1120	25.36		
26 SEPT	1130	25.76		
26 SEPT	1140	25.24		
26 SEPT	1150	24.72		
26 SEPT	1200	24.96		
26 SEPT	1210	25.60		
26 SEPT	1220	25.80		
26 SEPT	1235	25.90		
26 SEPT	1250	25.45		
26 SEPT	1300	25.20		
26 SEPT	1310	25.70		
26 SEPT	1320	25.95		
26 SEPT	1330	25.75		
26 SEPT	1340	25.10		
26 SEPT	1400	24.40		
26 SEPT	1410	24.35		
26 SEPT	1420	23.75		
26 SEPT	1440	23.48		
26 SEPT	1450	23.41		
26 SEPT	1500	23.25		
26 SEPT	1510	23.80		
26 SEPT	1520	23.42		
26 SEPT	1530	23.58		
26 SEPT	1540	23.62		
26 SEPT	1550	22.80		
26 SEPT	1600	21.95		
26 SEPT	1610	21.81		
26 SEPT	1620	22.19		
26 SEPT	1630	21.92		
26 SEPT	1640	21.62		
26 SEPT	1650	21.78		
26 SEPT	1700	21.65		
26 SEPT	1710	21.21		
26 SEPT	1720	21.37		
26 SEPT	1730	21.22		
26 SEPT	1740	21.03		
26 SEPT	1750	20.78		
26 SEPT	1800	20.76		
26 SEPT	1810	20.68		

GULF OF GUAYAQUIL CRUISE 6104
 TIME SERIES OF SURFACE TEMPERATURE
 DATA COLLECTED BETWEEN STA. 16-13

DATE	TIME	TEMP.	SAL.	SIG-T
	HRS.	DEG C	0/00	G/L
26 SEPT	1820	20.80		
26 SEPT	1830	21.18		
26 SEPT	1840	20.96		
26 SEPT	1850	20.92		
26 SEPT	1900	21.05		
26 SEPT	1910	20.98		
26 SEPT	1920	20.96		
26 SEPT	1930	20.94		
26 SEPT	1940	20.94		
26 SEPT	1950	20.96		
26 SEPT	2000	20.92		
26 SEPT	2010	20.19		
26 SEPT	2020	20.16		
26 SEPT	2030	21.19		
26 SEPT	2040	21.12,		
26 SEPT	2050	20.56		
26 SEPT	2100	20.82		
26 SEPT	2110	20.78		
26 SEPT	2120	20.94		
26 SEPT	2130	20.95		
26 SEPT	2140	20.78		
26 SEPT	2150	20.72		
26 SEPT	2200	22.20		
26 SEPT	2210	22.24		
26 SEPT	2220	22.24		
26 SEPT	2230	22.19		
26 SEPT	2240	22.28		
26 SEPT	2250	22.39		
26 SEPT	2300	22.25		
26 SEPT	2310	22.25		
26 SEPT	2320	22.20		
26 SEPT	2330	22.20		
26 SEPT	2340	22.15		
26 SEPT	2350	22.20		
27 SEPT	0030	22.02		
27 SEPT	0040	22.10		
27 SEPT	0050	22.08		
27 SEPT	0100	21.96		
27 SEPT	0110	22.04	33.91	23.40
27 SEPT	0120	21.80		
27 SEPT	0130	21.94		
27 SEPT	0140	22.02		
27 SEPT	0230	19.95		
27 SEPT	0240	19.92	33.73	23.84
27 SEPT	0250	19.90		

GULF OF GUAYAQUIL CRUISE 6104
 TIME SERIES OF SURFACE TEMPERATURE
 DATA COLLECTED BETWEEN STA. 16-13

DATE	TIME	TEMP.	SAL.	SIG-T
	HRS.	DEG C	0/00	G/L
27 SEPT	0300	19.86		
27 SEPT	0310	19.84		
27 SEPT	0320	19.92		
27 SEPT	0330	19.92	33.73	23.84
27 SEPT	0340	19.36		

DATA COLLECTED BETWEEN STA. 13-7

27 SEPT	0410	19.18		
27 SEPT	0420	19.18		
27 SEPT	0430	19.20		
27 SEPT	0440	19.65	33.57	23.78
27 SEPT	0500	19.80		
27 SEPT	0510	19.80		
27 SEPT	0520	19.25		
27 SEPT	0535	19.75		
27 SEPT	0545	19.80	33.60	23.77
27 SEPT	0700	20.20		
27 SEPT	0715	20.15		
27 SEPT	0725	20.05		
27 SEPT	0740	20.40		
27 SEPT	0800	19.95	33.44	23.61
27 SEPT	0830	19.95		
27 SEPT	0840	19.95		

DATA COLLECTED BETWEEN STA. 7-4

27 SEPT	0920	20.16		
27 SEPT	1150	20.36		
27 SEPT	1200	20.28	33.95	23.91
27 SEPT	1210	20.32		
27 SEPT	1220	20.38		
27 SEPT	1230	20.32		
27 SEPT	1240	20.48		
27 SEPT	1250	20.50	33.93	23.84
27 SEPT	1300	20.28		
27 SEPT	1330	19.86		
27 SEPT	1400	20.34		
27 SEPT	1430	20.60		
27 SEPT	1500	20.54	33.80	23.73
27 SEPT	1530	20.85		
27 SEPT	1600	20.15		
27 SEPT	1630	20.55		
27 SEPT	1700	20.55		
27 SEPT	1730	20.75	34.31	24.06
27 SEPT	1800	21.60		
27 SEPT	1830	21.40		
27 SEPT	1900	21.40		
27 SEPT	1930	19.55		
27 SEPT	2000	21.40	33.58	23.33

GULF OF GUAYAQUIL CRUISE 6105
 TIME SERIES OF SURFACE TEMPERATURE-SALINITY
 DATA COLLECTED BETWEEN STATIONS 4-10

DATE	TIME HRS.	TEMP. DEG.C	SAL. 0/00	SIG-T G/L
6 OCT.	0710	19.94		
6 OCT.	0720	20.08		
6 OCT.	0730	20.18		
6 OCT.	0740	20.26		
6 OCT.	0750	20.24	30.73	21.47
6 OCT.	0800	20.36		
6 OCT.	0810	20.22		
6 OCT.	0820	20.60		
6 OCT.	0830	20.65		
6 OCT.	0840	21.38	31.83	22.01
6 OCT.	0850	21.42		
6 OCT.	0900	21.22		
6 OCT.	0910	21.42		
6 OCT.	0920	21.45		
6 OCT.	0930	21.41	33.04	22.91
6 OCT.	0940	21.72		
6 OCT.	0950	20.22		
6 OCT.	1000	21.18		
6 OCT.	1010	20.18		
6 OCT.	1030	21.21		
6 OCT.	1020	21.22	33.42	23.25
6 OCT.	1040	21.18		
6 OCT.	1050	21.16		
6 OCT.	1100	21.78		
6 OCT.	1110	21.12	33.40	23.27
6 OCT.	1120	21.14		
6 OCT.	1130	21.28		
6 OCT.	1140	21.39		
6 OCT.	1150	21.50		

GULF OF GUAYAQUIL CRUISE 6106
 TIME SERIES OF SURFACE TEMPERATURE-SALINITY
 DATA COLLECTED BETWEEN STATIONS A-L

DATE	TIME	TEMP.	SAL.	SIG-T
	HRS.	DEG.C	0/00	G/L
18 OCT.	0610	25.26		
18 OCT.	0720	24.00		
18 OCT.	0725	24.25		
18 OCT.	0730	24.27		
18 OCT.	0735	23.29		
18 OCT.	0740	25.22		
18 OCT.	0745	25.30	31.49	20.63
18 OCT.	0800	25.34		
18 OCT.	0810	25.15		
18 OCT.	0815	25.05		
18 OCT.	0820	25.02		
18 OCT.	0825	25.21	31.69	20.80
18 OCT.	0840	25.31		
18 OCT.	0845	25.35		
18 OCT.	0850	25.01		
18 OCT.	0855	25.09	31.35	20.59
18 OCT.	0900	25.20		
18 OCT.	0915	25.30		
18 OCT.	0920	25.50		
18 OCT.	0925	25.61		
18 OCT.	0930	25.50		
18 OCT.	0935	25.31		
18 OCT.	0940	25.40		
18 OCT.	0945	25.43		
18 OCT.	0950	25.44	31.51	20.60
18 OCT.	1005	25.60		
18 OCT.	1010	25.61		
18 OCT.	1015	25.61		
18 OCT.	1020	25.69		
18 OCT.	1025	25.61		
18 OCT.	1030	25.62		
18 OCT.	1035	25.70		
18 OCT.	1040	25.70		
18 OCT.	1045	25.70		
18 OCT.	1050	25.70	31.67	20.64
18 OCT.	1120	25.60		
18 OCT.	1125	25.50		
18 OCT.	1130	25.41		
18 OCT.	1135	25.41		
18 OCT.	1140	25.42		
18 OCT.	1145	25.45		
18 OCT.	1150	25.60	32.59	21.36
18 OCT.	1210	25.90		
18 OCT.	1215	25.85		
18 OCT.	1220	26.00		

GULF OF GUAYAQUIL CRUISE 6106
 TIME SERIES OF SURFACE TEMPERATURE-SALINITY
 DATA COLLECTED BETWEEN STATIONS A-L

DATE	TIME HRS.	TEMP. DEG.C	SAL. 0/00	SIG-T G/L
18 OCT.	1225	26.00		
18 OCT.	1230	25.90		
18 OCT.	1235	25.60		
18 OCT.	1240	25.31		
18 OCT.	1250	25.10	33.26	22.02
18 OCT.	1255	25.20		
18 OCT.	1300	25.10		
18 OCT.	1305	25.00		
18 OCT.	1310	25.40		
18 OCT.	1320	25.49	32.52	21.34
18 OCT.	1325	25.48		
18 OCT.	1340	25.20		
18 OCT.	1345	25.40		
18 OCT.	1350	25.21		
18 OCT.	1355	25.80		
18 OCT.	1400	25.90		
18 OCT.	1405	25.91		
18 OCT.	1410	25.22		
18 OCT.	1420	21.10		
18 OCT.	1425	21.10		
18 OCT.	1430	24.90		
18 OCT.	1435	24.80		
18 OCT.	1440	24.80		
18 OCT.	1445	24.90		
18 OCT.	1450	24.60	32.74	21.78
18 OCT.	1455	24.60		
18 OCT.	1500	24.40		
18 OCT.	1505	24.60		
18 OCT.	1510	24.50		
18 OCT.	1520	24.50	32.72	21.79
18 OCT.	1525	24.30		
18 OCT.	1530	24.00		
18 OCT.	1535	24.00		
18 OCT.	1540	24.10		
18 OCT.	1545	24.40		
18 OCT.	1550	24.40	32.74	21.84
18 OCT.	1555	24.40		
18 OCT.	1600	24.40		
18 OCT.	1605	23.90		
18 OCT.	1610	24.00		
18 OCT.	1615	24.30		
18 OCT.	1620	24.40	32.72	21.82
18 OCT.	1625	24.40		
18 OCT.	1630	24.30		
18 OCT.	1635	24.30		

GULF OF GUAYAQUIL CRUISE 6106
 TIME SERIES OF SURFACE TEMPERATURE-SALINITY
 DATA COLLECTED BETWEEN STATIONS A-L

DATE	TIME	TEMP.	SAL.	SIG-T
	HRS.	DEG.C	0/00	G/L
18 OCT.	1640	24.30		
18 OCT.	1645	24.30		
18 OCT.	1650	23.90		
18 OCT.	1655	24.90		
18 OCT.	1700	25.00		
18 OCT.	1705	25.00		
18 OCT.	1710	25.00		
18 OCT.	1715	25.10		

GULF OF GUAYAQUIL CRUISE 6107
 TIME SERIES OF SURFACE TEMPERATURE-SALINITY
 DATA COLLECTED IN JAMBELI CHANNEL #R/V ST. JUDE*

DATE	TIME	TEMP.	SAL.	SIG-T
	HRS.	DEG C	0/00	G/L
1 NOV.	1200	21.45	33.68	23.39
1 NOV.	1220	21.00	33.28	23.21
1 NOV.	1240	20.90	33.13	23.12
1 NOV.	1300	20.70	32.83	22.95
1 NOV.	1320	20.90	32.99	23.01
1 NOV.	1340	20.85	33.03	23.06
1 NOV.	1440	22.00	32.34	22.22
1 NOV.	1500	22.40	32.23	22.03
1 NOV.	1520	22.50	32.07	21.88
1 NOV.	1540	22.10	32.07	21.99
1 NOV.	1600	22.10	31.92	21.88
1 NOV.	1640	24.20	31.98	21.32
1 NOV.	1700	24.40	31.56	20.95
1 NOV.	1720	24.42	31.46	20.87
1 NOV.	1740	22.20	31.29	21.37
1 NOV.	1800	22.45	30.99	21.08
1 NOV.	1820	22.28	31.00	21.13
1 NOV.	1840	22.20	31.35	21.42

GULF OF GUAYAQUIL CRUISE 6108
 TIME SERIES OF SURFACE TEMPERATURE/SALINITY
 DATA COLLECTED BETWEEN STATIONS S-F

DATE	TIME	TEMP.	SAL.	SIG-T
	HRS.	DEG.C	0/00	G/L
10 DEC.	0820	24.61	33.46	22.32
10 DEC.	0840	24.56	33.22	22.15
10 DEC.	0900	24.60	33.35	22.24
10 DEC.	0920	24.98	33.37	22.14
10 DEC.	0940	24.30	33.51	22.45
10 DEC.	1000	25.48	33.44	22.04
10 DEC.	1020	25.64	33.49	22.03
10 DEC.	1040	24.48	33.33	22.26
10 DEC.	1100	26.20	33.04	21.52
10 DEC.	1120	26.60	32.81	21.22
10 DEC.	1140	27.42	32.77	20.93
10 DEC.	1200	27.76	32.54	20.65
10 DEC.	1220	26.92	32.21	20.67
10 DEC.	1240	26.21	32.72	21.27

GULF OF GUAYAQUIL CRUISE 6109
 TIME SERIES OF SURFACE TEMPERATURE-SALINITY-OXYGEN
 DATA COLLECTED BETWEEN PTA. JAMBELI AND ISLA SANTA CLARA

DATE	TIME	TEMP.	SAL.	SIG-T	OXY.
	HRS.	DEG.C	0/00	G/L	ML/L
12 DEC.	0646	23.94	33.93	22.81	
12 DEC.	1204	23.90	33.62	22.59	
12 DEC.	1345	22.94	34.83	23.78	
12 DEC.	1545	22.20	33.64	23.10	
12 DEC.	1710	21.18	34.29	23.88	
12 DEC.	2100	21.18	34.36	23.93	
12 DEC.	2325	22.00	33.78	23.27	
12 DEC.	0235	22.40	33.62	23.03	
12 DEC.	0550	22.60	33.55	22.92	
12 DEC.	0810	22.78	33.49	22.82	
12 DEC.	0950	23.12	32.12	21.70	
12 DEC.	1250	24.80	33.68	22.36	

GULF OF GUAYAQUIL CRUISE 6111
 TIME SERIES OF SURFACE TEMPERATURE-SALINITY-OXYGEN
 DATA COLLECTED BETWEEN STATIONS 7-6

DATE	TIME	TEMP.	SAL.	SIG-T	OXY.
	HRS.	DEG.C	0/00	G/L	ML/L
19 DEC.	1200	24.2	33.34	22.35	4.70
DATA COLLECTED BETWEEN STATIONS 7-2					
19 DEC.	1400	24.3	33.48	22.43	4.70
DATA COLLECTED BETWEEN STATIONS 2-3					
19 DEC.	1600	24.4	33.44	22.37	4.51
DATA COLLECTED BETWEEN STATIONS 5-8					
20 DEC.	0935	24.1	33.48	22.48	4.66
DATA COLLECTED BETWEEN STATIONS 8-10					
20 DEC.	1140	23.8	33.37	22.49	4.62
DATA COLLECTED BETWEEN STATIONS 10-11					
20 DEC.	1430	24.3	33.48	22.43	4.58
DATA COLLECTED BETWEEN STATIONS 11-12					
20 DEC.	1545	24.2	33.44	22.42	4.46
DATA COLLECTED BETWEEN STATIONS 12-13					
20 DEC.	1730	23.8	33.49	22.58	4.91
DATA COLLECTED BETWEEN STATIONS 21-20					
21 DEC.	0915	23.8	33.51	22.60	4.49
DATA COLLECTED BETWEEN STATIONS 20-19					
21 DEC.	1045	24.0	33.49	22.52	4.31
DATA COLLECTED BETWEEN STATIONS 19-18					
21 DEC.	1215	24.7	33.51	22.33	4.51
DATA COLLECTED BETWEEN STATIONS 18-14					
21 DEC.	1450	24.2	33.36	22.36	4.38
DATA COLLECTED BETWEEN STATIONS 14-15					
21 DEC.	1700	24.6	33.67	22.48	4.81
DATA COLLECTED BETWEEN STATIONS 15-16					
21 DEC.	1835	23.9	33.34	22.44	4.25

GULF OF GUAYAQUIL CRUISE 6215
 TIME SERIES OF TEMPERATURE AND PHOSPHATE
 DATA COLLECTED NEAR THE CERVECERIA EN EL RIO GUAYAS

DATE	TIME	DEPTH	TEMP.	PHOSPHATE
	HRS.	METERS	DEG.C	MCGMAT/L
7 JUNE	2250	00	25.79	3.212
7 JUNE		40	25.86	3.587
7 JUNE		80	26.05	3.231
7 JUNE		100	26.30	3.112
7 JUNE	2307	00	26.19	
7 JUNE		40	26.24	
7 JUNE		80	26.06	2.928
7 JUNE		100	26.12	3.519
7 JUNE	2353	00	26.32	3.059
7 JUNE		30	26.32	
7 JUNE		70	26.14	
7 JUNE		90	26.14	3.100

GULF OF GUAYAQUIL CRUISE 6215
 DATA COLLECTED NEAR THE CERVECERIA EN EL RIO GUAYAS
 TIME SERIES OF TEMPERATURE AND PHOSPHATE

DATE	TIME HRS.	DEPTH METERS	TEMP. DEG.C	PHOSPHATE MCGMAT/L
8 JUNE	0009	00	26.17	3.378
8 JUNE		40	26.12	
8 JUNE		80	26.02	
8 JUNE		100	26.08	3.088
8 JUNE	0227	00	26.20	3.477
8 JUNE		50	26.23	
8 JUNE		70	26.11	3.166
8 JUNE	0245	00	25.71	3.112
8 JUNE		40	25.80	
8 JUNE		60	25.73	3.079
8 JUNE	0509	00	26.16	3.284
8 JUNE		40	26.30	
8 JUNE		60	26.21	3.045
8 JUNE	0522	00	25.51	2.512
8 JUNE		40	25.56	
8 JUNE		60	25.45	2.423
8 JUNE	0625	00	26.60	3.284
8 JUNE		30	26.60	
8 JUNE		50	26.48	1.743
8 JUNE	0642	00	25.45	2.192
8 JUNE		30	25.40	
8 JUNE		50	25.31	1.848
8 JUNE	0721	00	26.47	1.361
8 JUNE		30	26.25	
8 JUNE		50	25.93	3.003
8 JUNE	0734	00	25.36	2.274
8 JUNE		30	25.32	
8 JUNE		55	25.22	2.243
8 JUNE	0920	00	26.11	3.419
8 JUNE		40	26.01	
8 JUNE		65	25.91	3.998
8 JUNE	0934	00	25.72	3.053
8 JUNE		40	25.68	
8 JUNE		60	25.57	3.217
8 JUNE	1059	00	26.39	2.738
8 JUNE		30	26.06	
8 JUNE		70	25.98	
8 JUNE		90	25.97	3.032
8 JUNE	1112	00	26.00	3.150
8 JUNE		30	25.97	
8 JUNE		60	25.87	
8 JUNE		80	25.85	3.230
8 JUNE	1207	00	26.27	3.234
8 JUNE		30	26.15	
8 JUNE		70	26.11	
8 JUNE		90	26.08	3.142

GULF OF GUAYAQUIL CRUISE 6215
 TIME SERIES OF TEMPERATURE AND PHOSPHATE
 DATA COLLECTED NEAR THE CERVECERIA EN EL RIO JAYAS

DATE	TIME HRS.	DEPTH METERS	TEMP. DEG.C	PHOSPHATE MCGMAT/L
8 JUNE	1219	00	26.13	3.167
8 JUNE		30	26.08	
8 JUNE		70	25.92	
8 JUNE		90	25.91	3.100
8 JUNE	1500	00	26.28	3.196
8 JUNE		40	26.24	
8 JUNE		60	26.15	3.398
8 JUNE	1520	00	25.98	2.919
8 JUNE		40	25.94	
8 JUNE		60	25.86	2.814
8 JUNE	1736	00	26.32	2.822
8 JUNE		20	26.30	
8 JUNE		45	26.19	2.843
8 JUNE	1748	00	25.86	2.352
8 JUNE		50	25.85	
8 JUNE		70	25.80	2.402
8 JUNE	1843	00	26.38	2.709
8 JUNE		40	26.41	
8 JUNE		60	26.35	2.906
8 JUNE	1900	00	25.81	2.272
8 JUNE		30	25.80	
8 JUNE		50	25.53	2.264

GULF OF GUAYAQUIL CRUISE 6218
 TIME SERIES OF TEMPERATURE AND PHOSPHATE
 DATA COLLECTED WITHIN 200 M. OF THE CERVECERIA IN GUAYAQUIL

DATE	TIME HRS.	DEPTH METERS	TEMP. DEG.C	PHOSPHATE MCGMAT/L
28 JUNE	2042	00	24.52	3.460
28 JUNE		50	24.46	3.632
28 JUNE	2125	00	24.41	3.896
28 JUNE		40	24.40	3.952
28 JUNE	2325	00	24.42	4.060
28 JUNE		50	24.36	4.216
28 JUNE	2340	00	24.33	3.856
28 JUNE		40	24.39	4.672
29 JUNE	0245	00	24.34	3.432
29 JUNE		50	24.34	3.100
29 JUNE	0257	00	24.17	3.608
29 JUNE		40	24.17	3.328

GULF OF GUAYAQUIL CRUISE 6218
TIME SERIES OF TEMPERATURE AND PHOSPHATE
DATA COLLECTED WITHIN 200 M. OF THE CERVECERIA IN GUAYAQUIL

DATE	TIME	DEPTH	TEMP.	PHOSPHATE
	HRS.	METERS	DEG.C	MCGMAT/L
29 JUNE	0554	00	24.18	3.272
29 JUNE		70	24.34	3.532
29 JUNE	0605	00	24.18	2.297
29 JUNE		70	24.26	2.560
29 JUNE	0800	00	24.23	3.500
29 JUNE		50	24.19	3.380
29 JUNE	0812	00	24.16	3.408
29 JUNE		50	24.18	3.344
29 JUNE	1217	00	25.29	3.840
29 JUNE		40	25.23	4.076
29 JUNE	1230	00	24.45	3.504
29 JUNE		40	24.40	3.224

GULF OF GUAYAQUIL CRUISE 6224
TIME SERIES OF TEMPERATURE SALINITY OXYGEN AND PHOSPHATE
DATA COLLECTED IN THE PUNA LAGOON NEAR THE PUENTE DE DATA

DATE	TIME	DEPTH	TEMP.	PHOSPHATE	SAL.	OXY.
	HRS.	METERS	DEG.C	MCGMAT/L	0/00	ML/L
6 AUG.	1703	00	24.07	228	31.29	4.12
6 AUG.	1711	10	23.93	128	31.58	3.93
6 AUG.	1703	20	24.92		31.80	3.74
6 AUG.	1915	00	23.89		29.09	4.97
6 AUG.	1915	10	23.91		29.04	4.95
6 AUG.	1915	20	23.94		29.14	4.96
6 AUG.	2038	00	23.79		29.20	4.93
6 AUG.	2043	10	23.78		29.25	4.91
6 AUG.	2048	20	23.79		29.25	2.97
7 AUG.	0618	00	23.26	2.148	29.18	4.89
7 AUG.	0621	10	23.22	1.916	29.16	4.89
7 AUG.	0632	20	23.29	2.004	29.14	4.89
7 AUG.	0743	00	23.18	1.998	29.45	4.89
7 AUG.	0750	10	23.18	2.072	29.36	4.88
7 AUG.	0743	20	23.21	2.132	29.38	4.81
7 AUG.	0843	00	23.16	2.036	29.42	4.90
7 AUG.	0851	10	23.17	2.128	29.43	4.87
7 AUG.	0843	25	23.20	2.168	29.42	4.86
7 AUG.	0958	00	23.16	2.128	29.40	4.93
7 AUG.	1003	15	23.13	2.172	29.47	4.83
7 AUG.	0958	30	23.18	1.948	29.47	4.80
7 AUG.	1110	00	23.20	2.148	29.31	4.92
7 AUG.	1110	15	23.18	2.084	29.36	4.91
7 AUG.	1110	30	23.20	2.128	29.43	4.96
7 AUG.	1229	00	23.23	2.228	29.34	4.77
7 AUG.	1235	10	23.20	2.164	29.34	4.75

GULF OF GUAYAQUIL CRUISE 6224
 TIME SERIES OF TEMPERATURE SALINITY OXYGEN AND PHOSPHATE
 DATA COLLECTED IN THE PUNA LAGCON NEAR THE PUENTE DE DATA

DATE	TIME	DEPTH	TEMP.	PHOSPHATE	SAL.	OXY.
	HRS.	METERS	DEG.C	MG/MAT/L	0/00	ML/L
7 AUG.	1229	25	23.22	2.200	29.31	4.74
7 AUG.	1335	00	23.30	2.256	29.33	4.81
7 AUG.	1335	10	23.28	2.080	29.34	4.76
7 AUG.	1335	25	23.28	1.932	29.36	4.60
7 AUG.	1615	00	23.73	2.628	31.67	3.88
7 AUG.	1615	10	23.66		31.94	3.83
7 AUG.	1622	25	23.65	2.868	32.12	3.70
7 AUG.	1735	00	23.63		31.76	4.04
7 AUG.	1741	10	23.63		31.85	3.84
7 AUG.	1746	25	23.65		32.05	3.76
7 AUG.	1912	00	23.36		29.45	4.90
7 AUG.	1912	10	23.37		29.40	4.89

GULF OF GUAYAQUIL COLOMBIA COASTAL CRUISE 62/34

STA. POSITION DEPTH SAL. CXY.

LAT.	LONG.	METERS	0/00	ML/L
06-17N	77-24W	00	2905	438
06-17N	77-24W	25	2902	431
06-19N	77-25W	00	3050	433
06-19N	77-25W	25	2997	426
06-06N	77-23W	00	2882	442
06-06N	77-23W	25	2835	451
05-42N	77-15W	00	2759	457
05-42N	77-15W	25	2772	445
05-42N	77-15W	50		421
05-42N	77-15W	100		414
05-29N	77-33W	00	2754	423
05-29N	77-33W	80	2761	062
05-10N	77-30W	00	3445	421
04-03N	77-28W	00	3261	318
04-03N	77-28W	50	3254	298
03-48N	77-16W	00	2835	423
03-48N	77-16W	25	2849	419
03-48N	77-16W	50		415
03-51N	77-09W	00	1665	410
03-50N	77-10W	00	1676	414
03-49N	77-11W	00	1676	413
03-48N	77-12W	00	1667	413
03-46N	77-17W	00	1572	374
03-46N	77-17W	25	1573	374
03-46N	77-17W	50	1646	361
03-47N	77-18W	00	1088	343
03-47N	77-18W	25	1090	330
03-20N	77-28W	00	1478	426
03-20N	77-28W	50	1469	401
03-22N	77-30W	00	3275	424
03-22N	77-30W	25	3256	420
03-22N	77-30W	50	3250	392
02-59N	77-43W	00	3174	475
02-59N	77-43W	25	3364	427

GULF OF GUAYAQUIL CRUISE 6401 CHEMICAL DATA

DATE	STATION	TIME	DEPTH	PO4	NO2	SI04
		HRS.	M	MC.GM-AT/L		
JAN	7	V-1	1720	0.0	1.89	.2 43.
JAN	7	V-1	1720	2.5	2.26	.2 34.
JAN	8	V-2	0655	0.0	2.02	.3 34.
JAN	8	V-2	0655	2.5	1.91	.2 32.
JAN	8	A-1	1106	0.0	1.91	.3 23.
JAN	8	A-1	1106	5.0	2.57	.3 22.
JAN	8	A-1	1106	10.0	1.89	.2 29.
JAN	8	A-1	1106	20.0	1.89	.2 23.
JAN	8	A-1	1106	30.0	1.68	.2 29.
JAN	8	B-1	1140	0.0	2.11	.2 30.
JAN	8	B-1	1140	2.5	2.36	.1 25.
JAN	8	B-1	1140	5.0	2.01	.2 33.
JAN	8	B-1	1140	7.5	2.32	.2 33.
JAN	8	C-1	1221	0.0	2.03	.2 27.
JAN	8	C-1	1221	2.5	2.16	.3 27.
JAN	8	C-1	1221	5.0	2.25	.2 31.
JAN	8	D-1	1316	0.0	1.98	.3 32.
JAN	8	D-1	1316	2.5	2.01	.5 37.
JAN	8	E-1	1355	0.0	1.90	.4 37.
JAN	8	E-1	1355	2.5	2.11	.6 24.
JAN	8	F-1	1456	0.0	1.82	.4 22.
JAN	8	F-1	1456	2.5	1.94	.4 29.
JAN	8	F-1	1456	5.0	2.05	.5 34.
JAN	8	F-1	1456	7.5	1.95	.6
JAN	8	H-1	1531	0.0	2.19	.4 41.
JAN	8	H-1	1531	2.5	2.27	.2 35.
JAN	8	G-1	1554	0.0	2.16	.3 36.
JAN	8	G-1	1554	2.5	2.09	.3 27.
JAN	9	F-2	0656	0.0	2.06	.7 28.
JAN	9	F-2	0656	2.5	2.05	.5 24.
JAN	9	F-2	0656	5.0	1.98	.4 24.
JAN	9	F-2	0656	7.5	1.98	.4 24.
JAN	9	I-1	0835	0.0	2.05	.4 35.
JAN	9	I-1	0835	2.5	1.88	.4 28.
JAN	9	I-1	0835	5.0	1.68	.4 25.
JAN	9	J-1	0926	0.0	2.16	.5 41.
JAN	9	J-1	0926	2.5	1.93	.4 39.
JAN	9	K-1	1004	0.0	1.55	.4 19.
JAN	9	K-1	1004	2.5	1.69	.4 17.
JAN	9	L-1	1040	0.0	1.31	.4 26.
JAN	9	L-1	1040	2.5	1.51	.5 23.
JAN	9	M-1	1113	0.0	1.42	.4 15.
JAN	9	M-1	1113	2.5	1.39	.5 32.
JAN	9	M-1	1113	5.0	1.39	.5 14.
JAN	9	M-1	1113	7.5	1.42	.5 16.

GULF OF GUAYAQUIL CRUISE 6401 CHEMICAL DATA

DATE	STATION	TIME	DEPTH	PO4	NO2	SIC4
		HRS.	M	MC.GM-AT/L		
JAN 9	N-1	1215	0.0	1.23	.3	16.
JAN 9	N-1	1215	2.5	1.31	.5	5.
JAN 9	N-1	1215	5.0	1.42	.7	15.
JAN 9	N-1	1215	7.5	1.33	.8	16.
JAN 9	O-1	1256	0.0	1.07	.3	10.
JAN 9	O-1	1256	2.5	.66	.5	15.
JAN 9	O-1	1256	5.0	1.15	.6	15.
JAN 9	P-1	1335	0.0	.85	.1	16.
JAN 9	P-1	1335	2.5	.95	.2	11.
JAN 9	P-1	1335	5.0	1.13	.3	9.
JAN 9	Q-1	1420	0.0	1.08	.5	18.
JAN 9	Q-1	1420	2.5	1.15	1.2	22.
JAN 9	Q-1	1420	5.0	1.37	1.5	27.
JAN 9	Q-1	1420	7.5	1.23	1.3	22.
JAN 10	P-2	0650	0.0	1.13	1.1	20.
JAN 10	P-2	0650	2.5	1.19	.9	27.
JAN 10	P-2	0650	5.0	1.16	1.1	24.
JAN 10	R-1	0906	0.0	.76	.1	10.
JAN 10	R-1	0906	5.0	.75	.1	9.
JAN 10	R-1	0906	10.0	1.53	.5	18.
JAN 10	R-1	0906	15.0	1.49	.3	22.
JAN 10	S-1	0948	0.0	.69	.1	6.
JAN 10	S-1	0948	5.0		.1	8.
JAN 10	S-1	0948	10.0	.82	.3	8.
JAN 10	S-1	0948	15.0	1.35	1.3	11.
JAN 10	S-1	0948	20.0	1.27	1.0	14.
JAN 10	T-1	1040	0.0	.71	.1	6.
JAN 10	T-1	1040	5.0	.98	.3	12.
JAN 10	T-1	1040	10.0	1.20	.9	25.
JAN 10	T-1	1040	15.0	1.31	.8	10.
JAN 10	T-1	1040	20.0	1.34	1.0	11.
JAN 10	U-1	1123	0.0	.95	.5	13.
JAN 10	U-1	1123	5.0	1.12	.4	10.
JAN 10	U-1	1123	10.0	1.14	.8	9.
JAN 10	U-1	1123	15.0	1.37	1.1	10.

GULF OF GUAYAQUIL CRUISE 6405 CHEMICAL DATA

DATE	STATION	TIME	DEPTH	PH
FEB 10	4-1	0420	0.0	8.02
FEB 10	4-1	0420	5.0	8.07
FEB 10	4-1	0420	10.0	8.10
FEB 10	4-1	0420	15.0	7.82

GULF OF GUAYAQUIL CRUISE 6409 CHEMICAL DATA

DATE	STATION	TIME	DEPTH	PO4	NO2	SI04
		HRS.	M	MC.GM-AT/L		
MAR	5	2-1	0905	0.0	.52	.1 7.
MAR	5	2-1	0905	5.0	.69	.2 9.
MAR	5	2-1	0905	15.0	1.59	.7 13.
MAR	5	2-1	0905	25.0	1.90	.1 16.
MAR	5	1-1	1012	0.0	.70	.1 2.
MAR	5	1-1	1012	5.0	.69	.2 5.
MAR	5	1-1	1012	10.0	1.92	.4 12.
MAR	5	1-1	1012	25.0	1.76	.5 12.
MAR	5	1-1	1012	50.0	1.98	.3 11.
MAR	5	4-1	0345	0.0	.71	.1 10.
MAR	5	4-1	0345	2.5	.67	.1 8.
MAR	5	4-1	0345	5.0	1.61	.6 20.
MAR	5	3-1	0635	0.0	.59	.1 18.
MAR	5	3-1	0635	5.0	.56	.1 2.
MAR	5	3-1	0635	10.0	.51	.1 10.
MAR	5	3-1	0635	20.0	1.83	.4 23.
MAR	5	5-1	1250	0.0	.47	.1 8.
MAR	5	5-1	1250	5.0	.53	.1 4.
MAR	5	5-1	1250	10.0	.96	.3 5.
MAR	5	5-1	1250	20.0	1.71	.6 15.
MAR	5	5-1	1250	29.0	1.78	.3 17.
MAR	5	6-1	1500	0.0	.48	.1 10.
MAR	5	6-1	1500	5.0	.71	.1 18.
MAR	5	6-1	1500	10.0	1.69	.3 11.
MAR	5	6-1	1500	20.0	2.06	.1 18.
MAR	7	8-1	0840	0.0	.51	.1 10.
MAR	7	8-1	0840	5.0	.78	.1 3.
MAR	7	8-1	0840	10.0	1.13	.5 6.
MAR	7	8-1	0840	20.0	1.78	.3 12.
MAR	7	8-1	0840	30.0	2.00	.2 17.
MAR	7	9-1	1020	0.0	.45	.1 2.
MAR	7	9-1	1020	5.0	.51	.1 8.
MAR	7	9-1	1020	10.0	.62	.1 6.
MAR	7	9-1	1020	20.0	1.93	.4 14.
MAR	7	9-1	1020	30.0	1.64	.1 14.
MAR	8	11-1	0417	0.0	.56	.1 12.
MAR	8	11-1	0417	5.0	1.11	.3 7.
MAR	8	11-1	0417	10.0	1.92	.3 20.
MAR	8	11-1	0417	20.0	.64	.1 4.
MAR	8	7-1	0704	0.0	.95	.1 10.
MAR	8	7-1	0704	5.0	1.23	.2 6.
MAR	8	7-1	0704	10.0	1.98	.1 14.
MAR	8	7-1	0704	20.0	2.07	.4 22.
MAR	7	14-1	2350	0.0	.74	.1 7.
MAR	7	14-1	2350	5.0	1.91	.6 15.
MAR	7	14-1	2350	10.0	.53	.06 4.
MAR	8	13-1	0148	0.0	.82	.13 5.

GULF OF GUAYACUIL CRUISE 6409 CHEMICAL DATA

DATE	STATION	TIME	DEPTH	PO4	NO2	SI04
		HRS.	M	MC.GM-AT/L		
MAR	8	13-1	0148	5.0	1.01	.1 8.
MAR	8	13-1	0148	10.0	2.03	.09 23.
MAR	8	13-1	0148	20.0	.57	.06 4.
MAR	6	15-1	0732	0.0	.58	.04 1.
MAR	6	15-1	0732	5.0	.58	.07 4.
MAR	6	15-1	0732	10.0	.97	.4 9.
MAR	6	15-1	0732	20.0	1.92	.4 9.
MAR	6	12-1	0910	0.0	.55	1.9 3.
MAR	6	12-1	0910	5.0	.58	.06 5.
MAR	6	12-1	0910	10.0	.69	.1 5.
MAR	6	12-1	0910	20.0	1.55	.5 9.
MAR	6	12-1	0910	30.0	1.98	.1 18.
MAR	6	16-1	1605	0.0	.59	.03 9.
MAR	6	16-1	1605	5.0	.42	.08 8.
MAR	6	16-1	1605	10.0	.63	.2 12.
MAR	6	16-1	1605	20.0	1.99	.4 11.
MAR	6	17-1	1710	0.0	.84	.1 8.
MAR	6	17-1	1710	5.0	1.13	.2 20.
MAR	6	17-1	1710	10.0	1.35	.5 10.
MAR	6	17-1	1710	15.0	1.70	.6 17.
MAR	7	10-1	1145	0.0	.71	.06 20.
MAR	7	10-1	1145	5.0	.66	.06 11.
MAR	7	10-1	1145	10.0	.49	.2 13.
MAR	7	10-1	1145	15.0	2.00	.2 16.
MAR	7	18-1	1250	0.0	.71	.04 18.
MAR	7	18-1	1250	5.0	.88	.1 8.
MAR	7	18-1	1250	10.0	2.14	.7 16.
MAR	7	18-1	1250	20.0	.46	.03 6.
MAR	8	19-1	1340	0.0	.85	.06 5.
MAR	8	19-1	1340	10.0	.87	.2 6.
MAR	8	19-1	1340	20.0	1.26	.1 6.
MAR	8	19-1	1340	50.0	1.82	.3 17.
MAR	8	19-1	1340	74.0	1.84	.1 15.
MAR	8	19-1	1340	99.0	1.80	.1 13.
MAR	8	19-1	1340	163.0	2.07	.4 22.
MAR	8	19-1	1340	224.0	2.40	.08 22.
MAR	8	19-1	1340	436.0	3.10	.03 31.
MAR	8	19-1	1340	551.0	3.14	.09 33.
MAR	8	19-1	1340	651.0	3.10	.1 41.
MAR	8	19-1	1340	848.0	3.06	.1 41.
MAR	8	19-1	1340	1044.0	2.99	.1 36.

GULF OF GUAYAQUIL CRUISE 6410 CHEMICAL DATA

DATE	STATION	TIME	DEPTH	PO4	NO2	SIC4
		HRS.	M	MG.GM-AT/L		
MAR 11	V-1	2030	0.0	2.43	.9	79.
MAR 11	V-1	2030	2.5		.8	73.
MAR 11	V-1	2030	5.0	2.44	.9	82.
MAR 11	V-1	2030	7.0	2.47	.8	58.
MAR 12	V-2	0655	0.0	2.49	.8	55.
MAR 12	V-2	0655	2.5	2.62	.8	68.
MAR 12	V-2	0655	5.0	2.50	1.1	85.
MAR 12	V-2	0655	7.0	2.54	.7	81.
MAR 12	A-1	1116	0.0	1.83	1.2	69.
MAR 12	A-1	1116	5.0			
MAR 12	A-1	1116	10.0	2.00	1.1	56.
MAR 12	A-1	1116	15.0			
MAR 12	A-1	1116	20.0	2.35	1.8	85.
MAR 12	A-1	1116	30.0			
MAR 12	A-1	1116	50.0	1.54	1.4	72.
MAR 12	B-1	1207	0.0	2.16	.7	64.
MAR 12	B-1	1207	2.5			
MAR 12	B-1	1207	5.0	2.35	.8	59.
MAR 12	B-1	1207	7.5			
MAR 12	B-1	1207	10.0	2.42	.9	62.
MAR 12	C-1	1246	0.0	2.40	.8	84.
MAR 12	C-1	1246	2.5			
MAR 12	C-1	1246	5.0			
MAR 12	C-1	1246	7.5	2.89	.2	88.
MAR 12	D-1	1330	0.0	2.43	1.2	72.
MAR 12	D-1	1330	2.5			
MAR 12	D-1	1330	5.0	2.74	.7	84.
MAR 12	E-1	1358	0.0	2.38		98.
MAR 12	E-1	1358	2.5			
MAR 12	E-1	1358	5.0	2.53	.9	79.
MAR 12	F-1	1456	0.0	2.06	1.4	79.
MAR 12	F-1	1456	2.5			
MAR 12	F-1	1456	5.0	2.52	1.4	73.
MAR 12	F-1	1456	7.5			
MAR 12	F-1	1456	10.0	2.34	1.7	91.
MAR 12	F-1	1456	15.0	2.24	1.6	62.
MAR 12	H-1	1556	0.0	2.21	1.2	104.
MAR 12	H-1	1556	2.5			
MAR 12	H-1	1556	5.0	2.30		90.
MAR 12	G-1	1622	0.0	2.26		78.
MAR 12	G-1	1622	2.5			
MAR 12	G-1	1622	5.0			
MAR 12	G-1	1622	7.5	2.55	1.3	77.
MAR 13	F-2	0650	0.0	2.23	1.4	84.
MAR 13	F-2	0650	2.5	1.83	1.3	75.
MAR 13	F-2	0650	5.0	2.10	1.3	76.
MAR 13	F-2	0650	7.5	2.28	1.2	58.

GULF OF GUAYAQUIL CRUISE 6410 CHEMICAL DATA

DATE	STATION	TIME	DEPTH	PO4	NO2	SIH4
		HRS.	M			
				MC.CM-AT/L		
MAR 13	F-2	0650	10.0	1.90	1.3	68.
MAR 13	F-2	0650	15.0	2.12	1.8	67.
MAR 13	I-1	0835	0.0	2.06	2.0	85.
MAR 13	I-1	0835	2.5			
MAR 13	I-1	0835	5.0	1.85	2.0	63.
MAR 13	I-1	0835	7.5	2.13	2.0	68.
MAR 13	J-1	0913	0.0	2.63	1.3	72.
MAR 13	J-1	0913	2.5			
MAR 13	J-1	0913	4.0	2.60	1.3	45.
MAR 13	K-1	0942	0.0	2.03	1.8	72.
MAR 13	K-1	0942	2.5			
MAR 13	K-1	0942	5.0	2.30	1.5	82.
MAR 13	L-1	1007	0.0	1.91	2.0	78.
MAR 13	L-1	1007	2.5			
MAR 13	L-1	1007	5.0		2.1	51.
MAR 13	M-1	1039	0.0	1.67	1.5	55.
MAR 13	M-1	1039	2.5			
MAR 13	M-1	1039	5.0	1.76	1.5	43.
MAR 13	M-1	1039	7.5			
MAR 13	M-1	1039	10.0	1.74	1.2	42.
MAR 13	N-1	1122	0.0	1.60	.5	42.
MAR 13	N-1	1122	2.5			
MAR 13	N-1	1122	5.0	1.54	1.0	31.
MAR 13	N-1	1122	7.5			
MAR 13	N-1	1122	10.0	1.41	.7	34.
MAR 13	O-1	1207	0.0	1.71	1.0	45.
MAR 13	O-1	1207	2.5			
MAR 13	O-1	1207	5.0			
MAR 13	O-1	1207	7.5	1.72	1.1	48.
MAR 13	P-1	1247	0.0	1.63	1.2	54.
MAR 13	P-1	1247	2.5			
MAR 13	P-1	1247	5.0	1.84		50.
MAR 13	P-1	1247	7.5	1.89	1.1	25.
MAR 13	Q-1	1330	0.0	1.41	1.1	79.
MAR 13	Q-1	1330	2.5			
MAR 13	Q-1	1330	5.0	1.76	1.3	42.
MAR 13	Q-1	1330	7.5			
MAR 13	Q-1	1330	10.0	1.71	1.0	39.
MAR 14	P-2	0620	0.0	.85	.2	73.
MAR 14	P-2	0620	2.5	1.18	.6	68.
MAR 14	P-2	0620	5.0	1.54	1.3	64.
MAR 14	P-2	0620	7.5	1.57	1.2	34.
MAR 14	R-1	0845	0.0	.79	.4	52.
MAR 14	R-1	0845	2.5			
MAR 14	R-1	0845	5.0	.95	.4	38.
MAR 14	R-1	0845	7.5			
MAR 14	R-1	0845	10.0	1.48	1.0	46.

GULF OF GUAYAQUIL CRUISE 6410 CHEMICAL DATA

DATE	STATION	TIME	DEPTH	PO4	NO2	SiO4
		HRS.	M	MC.GM-AT/L		
MAR 14	R-1	0845	15.0			
MAR 14	R-1	0845	20.0	1.70	1.2	28.
MAR 14	S-1	0933	0.0	.74	.2	71.
MAR 14	S-1	0933	5.0			
MAR 14	S-1	0933	10.0			
MAR 14	S-1	0933	15.0	1.67		33.
MAR 14	S-1	0933	20.0			
MAR 14	S-1	0933	25.0	1.96	1.0	57.
MAR 14	T-1	1010	0.0	.71	.2	59.
MAR 14	T-1	1010	5.0			
MAR 14	T-1	1010	10.0	1.04	.1	29.
MAR 14	T-1	1010	15.0			
MAR 14	T-1	1010	20.0	1.33		34.
MAR 14	T-1	1010	25.0			
MAR 14	T-1	1010	35.0	1.87	.9	34.
MAR 14	U-1	1107	0.0	.66	.2	80.
MAR 14	U-1	1107	2.5			
MAR 14	U-1	1107	5.0	.84	.2	52.
MAR 14	U-1	1107	7.5			
MAR 14	U-1	1107	10.0			
MAR 14	U-1	1107	15.0	1.52	.7	38.

GULF OF GUAYAQUIL CRUISE 6412 CHEMICAL DATA

DATE	STATION	TIME	DEPTH	PO4	NO2	SiO4
		HRS.	M	MC.GM-AT/L		
APR 8	4-1	0424	0.0	.58	.05	47.
APR 8	4-1	0424	5.0	.56	.05	12.
APR 8	4-1	0424	10.0			
APR 8	4-1	0424	12.0	.87	.10	7.
APR 8	3-1	0732	0.0	.33	.07	4.
APR 8	3-1	0732	5.0			
APR 8	3-1	0732	10.0	.51	.05	3.
APR 8	3-1	0732	15.0			
APR 8	3-1	0732	20.0			
APR 8	3-1	0732	25.0	1.02	.40	7.
APR 8	2-1	1018	0.0	.45	.10	19.
APR 8	2-1	1018	5.0			
APR 8	2-1	1018	10.0	.48	.10	9.
APR 8	2-1	1018	20.0	1.10	.40	16.
APR 8	2-1	1018	30.0			
APR 8	2-1	1018	50.0	1.77	.40	17.
APR 8	1-1	1208	0.0	.40	.06	14.

GULF OF GUAYAQUIL CRUISE 6412 CHEMICAL DATA

DATE	STATION	TIME	DEPTH	PO4	NC2	SIO4
		HRS.	M			
				MC.GM-AT/L		
APR	8	1-1	1208	5.0		
APR	8	1-1	1208	10.0	.45	.05 3.
APR	8	1-1	1208	20.0		
APR	8	1-1	1208	30.0	1.23	.10 8.
APR	8	1-1	1208	50.0	1.95	.90 14.
APR	8	1-1	1208	75.0		
APR	8	1-1	1208	100.0	1.76	.07 11.
APR	8	5-1	1509	0.0	.45	.08 6.
APR	8	5-1	1509	5.0		
APR	8	5-1	1509	10.0	.46	.10 6.
APR	8	5-1	1509	20.0		
APR	8	5-1	1509	30.0	1.37	.60 13.
APR	8	5-1	1509	50.0	1.80	.50 12.
APR	8	5-1	1509	75.0	1.87	.10 16.
APR	8	6-1	1647	0.0	.51	.10 18.
APR	8	6-1	1647	5.0		
APR	8	6-1	1647	10.0	.62	.08 7.
APR	8	6-1	1647	20.0		
APR	8	6-1	1647	30.0	1.30	.50 12.
APR	8	6-1	1647	50.0	1.83	.70 11.
APR	8	6-1	1647	70.0	1.89	.30 6.
APR	9	15-1	0710	0.0	.43	.08 8.
APR	9	15-1	0710	5.0		
APR	9	15-1	0710	10.0	.44	.09 14.
APR	9	15-1	0710	15.0		
APR	9	15-1	0710	20.0	.70	.09 8.
APR	9	15-1	0710	35.0	1.21	.40 14.
APR	9	12-1	0924	0.0	.52	.10 16.
APR	9	12-1	0924	5.0		
APR	9	12-1	0924	10.0	.73	.30 19.
APR	9	12-1	0924	20.0		
APR	9	12-1	0924	30.0	1.64	.60 11.
APR	9	12-1	0924	40.0		
APR	9	12-1	0924	60.0	2.08	.30 24.
APR	9	8-1	1107	0.0	.51	.06 8.
APR	9	8-1	1107	5.0		
APR	9	8-1	1107	10.0	.68	.02 4.
APR	9	8-1	1107	20.0		
APR	9	8-1	1107	30.0	1.34	.30 11.
APR	9	8-1	1107	50.0	2.12	.10 38.
APR	9	8-1	1107	70.0	2.10	.20 22.
APR	9	9-1	1258	0.0	.38	.03 10.
APR	9	9-1	1258	5.0		
APR	9	9-1	1258	10.0	.51	.10 11.
APR	9	9-1	1258	20.0		
APR	9	9-1	1258	30.0	1.50	1.00 11.
APR	9	9-1	1258	40.0		

GULF OF GUAYAQUIL CRUISE 6412 CHEMICAL DATA

DATE	STATION	TIME	DEPTH	PO4	NO2	SI04
		HRS.	M	MC.GM-AT/L		
APR 9	9-1	1258	50.0	1.96	.60	16.
APR 9	10-1	1430	0.0	.63	1.00	14.
APR 9	10-1	1430	5.0			
APR 9	10-1	1430	10.0	.63	.02	17.
APR 9	10-1	1430	20.0			
APR 9	10-1	1430	30.0	1.59	.90	18.
APR 9	10-1	1430	40.0			
APR 9	10-1	1430	60.0	2.17	.10	16.
APR 9	18-1	1558	0.0	.42	.10	23.
APR 9	18-1	1558	5.0			
APR 9	18-1	1558	10.0	.60	.05	5.
APR 9	18-1	1558	15.0			
APR 9	18-1	1558	20.0	1.53	.80	14.
APR 9	18-1	1558	35.0	2.17	.20	26.
APR 9	17-1	1656	0.0	.42	.07	25.
APR 9	17-1	1656	5.0			
APR 9	17-1	1656	10.0	1.31	1.30	29.
APR 9	17-1	1656	15.0			
APR 9	17-1	1656	20.0	1.31	.60	11.
APR 9	17-1	1656	35.0	2.30	.60	32.
APR 9	16-1	1756	0.0	.43	.09	32.
APR 9	16-1	1756	5.0			
APR 9	16-1	1756	10.0	.50	.10	15.
APR 9	16-1	1756	15.0			
APR 9	16-1	1756	25.0	1.98	.80	16.

GULF OF GUAYAQUIL CRUISE 6101 STATION 1-1 LAT. 02 36.0 S LONG. 80 51.0 W DATE 19 JUL 1961
 TIME 0715- WEATHER 2 CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 24.0 C AIR TEMP.(WET) 20.1 C AIR TEMP.(DRY) 21.2 C
 RELATIVE HUMIDITY 90 0/0 BAROMETER 760 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN * O/00 SAT. ML/L	PO4 NO2 SIO4	* MICROGRM-AT/L *
0									
5.0	23.92	27.61	18.12	956					
15.0	23.96	27.81	18.26	943					
25.0	24.00	27.74	18.19	949					
35.0		27.68							

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN * O/00 SAT. ML/L	PO4 NO2 SIO4	* MICROGRM-AT/L *
0		-2.89	17.67		0				
2.5		-2.89	17.67		.035				
5.0	23.92	27.61	18.12	956	.070				
7.5	23.93	27.66	18.15	953	.094				
10.0	23.94	27.71	18.19	950	.118				
15.0	23.96	27.81	18.25	943	.165				
20.0	23.98	27.77	18.22	946	.212				
25.0	24.00	27.74	18.19	949	.260				

GULF OF GUAYAQUIL CRUISE 6101 STATION 2-1 LAT. 02 41.0 S LONG. 80 43.0 W DATE 19 JUL 1961
 TIME 0920- WEATHER 2 CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 23.1 C AIR TEMP.(WET) 20.3 C AIR TEMP.(DRY) 21.6 C
 RELATIVE HUMIDITY 90 0/0 BAROMETER 760 MM

OBSERVED		AND COMPUTED		VALUES AT OBSERVED		DEPTH S	
DEPTH	TEMP.	SAL.	SIG-T	THERMO	TOTAL	* O X Y G E N *	P04 NO2 SIO4
METERS	DEG C	O/00	G/L	ANOMALY	CO2	O/00 AOU	
				CL/T	MGC/M3	ML/L SAT.	ML/L * MICROGRM-AT/L *
0	23.96	27.30	17.87	980			
5.0	24.12	28.51	18.74	897			
10.0	24.09	28.71	18.90	881			
15.0	24.49						

INTERPOLATED		AND COMPUTED		VALUES AT STANDARD		DEPTH S	
DEPTH	TEMP.	SAL.	SIG-T	THERMO	TOTAL	* O X Y G E N *	P04 NO2 SIO4
METERS	DEG C	O/00	G/L	ANOMALY	CO2	O/00 AOU	
				CL/T	MGC/M3	ML/L SAT.	ML/L * MICROGRM-AT/L *
0	23.96	27.30	17.87	980			
2.5	24.07	27.37	17.89	978			
5.0	24.12	28.51	18.74	897			
7.5	24.11	28.61	18.81	889			
10.0	24.09	28.71	18.89	881			

GULF OF GUAYAQUIL CRUISE 6101 STATION 3-1 LAT. 02 46.0 S LONG. 80 35.0 W DATE 19 JUL 1961
 TIME 1030- WEATHER 2 CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 24.2 C AIR TEMP.(WET) 20.6 C AIR TEMP.(DRY) 21.6 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 760 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OXYGEN O/00	* PO4 AOU	NO2	SI04
0	24.22	29.81	19.68	805						
5.0	24.11	30.43	20.18	757						
10.0	24.05	30.66	20.37	739						
15.0	24.09	30.48	20.23	753						

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OXYGEN O/00	* PO4 AOU	NO2	SI04
0	24.22	29.81	19.68	805	0					
2.5	24.17	30.12	19.93	781	.020					
5.0	24.11	30.43	20.18	757	.039					
7.5	24.08	30.56	20.29	747	.058					
10.0	24.05	30.66	20.37	739	.076					
15.0	24.09	30.48	20.23	753	.114					

GULF OF GUAYAQUIL CRUISE 6101 STATION 4-1 LAT. 02 52.0 S LONG. 80 27.0 W DATE 19 JUL 1961
 TIME 1600- WEATHER 2 CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 23.8 C AIR TEMP.(WET) 20.8 C AIR TEMP.(DRY) 22.2 C
 RELATIVE HUMIDITY 88 0/0 BAROMETER 759 MM

U R S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AOU	P04	NO2	SI04
0	22.96	32.21	21.86	597						
5.0	22.72	32.21	21.92	590						
10.0	22.68	32.39	22.07	576						
15.0	22.51	32.54	22.23	561						

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AOU	P04	NO2	SI04
0	22.96	32.21	21.86	597	0					
2.5	22.84	32.21	21.89	594	.015					
5.0	22.72	32.21	21.92	590	.030					
7.5	22.70	32.31	22.01	582	.044					
10.0	22.68	32.39	22.07	576	.059					
15.0	22.51	32.54	22.23	561	.087					

GULF OF GUAYAQUIL CRUISE 6101 STATION 5-1 LAT. 02 52.0 S LONG. 80 51.0 W DATE 19 JUL 1961
 TIME 1640- WEATHER 2 CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 22.5 C AIR TEMP.(WET) 20.6 C AIR TEMP.(DRY) 22.2 C
 RELATIVE HUMIDITY 86 0/0 BAROMETER 759 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT. ML/L	* P O 4 ML/L	N O 2	S I O 4
0	22.54	32.65	22.31	554						
5.0	22.69	32.56	22.20	564						
10.0	22.59	32.86	22.45	540						

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT. ML/L	* P O 4 ML/L	N O 2	S I O 4
0	22.54	32.65	22.31	554	0					
2.5	22.64	32.59	22.23	561	.014					
5.0	22.69	32.56	22.20	564	.028					
7.5	22.63	32.73	22.34	550	.042					
10.0	22.59	32.86	22.45	540	.056					

GULF OF GUAYAQUIL CRUISE 6101 STATION 6-1 LAT. 02 56.0 S LONG. 80 39.0 W DATE 20 JUL 1961
 TIME 0800- WEATHER 2 CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 23.2 C AIR TEMP.(WET) 20.6 C AIR TEMP.(DRY) 21.1 C
 RELATIVE HUMIDITY 95 0/0 BAROMETER 761 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OXYGEN O/00	* PO4	NO2	SI04
0	23.28	32.38	21.89	593						
5.0	23.35	32.77	22.17	567						
10.0	23.20	32.68	22.14	569						

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OXYGEN O/00	* PO4	NO2	SI04
0	23.28	32.38	21.89	593	0					
2.5	23.33	32.42	21.91	592	.015					
5.0	23.35	32.77	22.17	567	.029					
7.5	23.27	32.72	22.15	568	.044					
10.0	23.20	32.68	22.14	569	.058					

GULF OF GUAYAQUIL CRUISE 6101 STATION 7-1 LAT. 03 08.0 S LONG. 80 51.0 W DATE 20 JUL 1961
 TIME 0930- WEATHER 2 CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. -
 SECCHI DISK DEPTH M SEA TEMP. 22.4 C AIR TEMP.(WET) 20.6 C AIR TEMP.(DRY) 22.2 C
 RELATIVE HUMIDITY 86 0/0 BAROMETER 761 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AOU	PO4	NO2	SI04
0	22.45	33.01	22.60	525						
5.0	22.43	32.74	22.41	544						
10.0	22.40	32.74	22.41	543						

INTERPOLATED AND COMPUTED VALUES AT STATION DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AOU	PO4	NO2	SI04
0	22.45	33.01	22.60	525	0					
2.5	22.44	32.82	22.46	538	.013					
5.0	22.43	32.74	22.41	544	.027					
7.5	22.42	32.74	22.41	544	.040					
10.0	22.40	32.74	22.41	543	.054					

GULF OF GUAYAQUIL CRUISE 6101 STATION 8-1 LAT. 03 08.0 S LONG. 80 43.0 W DATE 20 JUL 1961
 TIME 1055- WEATHER 2 CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 22.8 C AIR TEMP.(WET) 20.7 C AIR TEMP.(DRY) 21.7 C
 RELATIVE HUMIDITY 91 0/0 BAROMETER 759 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* O X Y G E N * O/00	PO4	NO2	SI04
0	22.75	31.22	21.17	663		MGC/M3	ML/L SAT.	ML/L	* MICROGRM-AT/L	*
5.0	22.00	32.70	22.50	536						
10.0	21.70	32.97	22.78	508						
15.0	20.00	33.89	23.94	398						

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* O X Y G E N * O/00	PO4	NO2	SI04
0	22.75	31.22	21.17	663	0	MGC/M3	ML/L SAT.	ML/L	* MICROGRM-AT/L	*
2.5	22.43	31.96	21.82	601	.016					
5.0	22.00	32.70	22.50	536	.030					
7.5	21.86	32.83	22.63	523	.043					
10.0	21.70	32.97	22.78	508	.056					
15.0	20.00	33.89	23.94	398	.079					

GULF OF GUAYAQUIL CRUISE 6101 STATION 9- 0 LAT. 03 08.0 S LONG. 80 35.0 W DATE 20 JUL 1961
 TIME 1525- WEATHER 1 CLOUD COVER 4/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 23.8 C AIR TEMP.(WET) 21.1 C AIR TEMP.(DRY) 23.1 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 757 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O4 AOU	NO2	SIU4
0	23.75	28.57	18.89	882			ML/L SAT.	ML/L	* MICROGRM-AT/L	*
12.0	23.75	28.55	18.87	883						
24.0	23.75	28.55	18.87	883						
36.0	23.60	28.31	18.73	897						

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O4 AOU	NO2	SIU4
0	23.75	28.57	18.89	882	0		ML/L SAT.	ML/L	* MICROGRM-AT/L	*
2.5	23.75	28.57	18.88	882	.022					
5.0	23.75	28.56	18.88	883	.044					
7.5	23.75	28.56	18.88	883	.066					
10.0	23.75	28.55	18.87	883	.088					
15.0	23.75	28.55	18.87	883	.132					
20.0	23.75	28.55	18.87	883	.177					
25.0	23.74	28.53	18.86	885	.221					
30.0	23.67	28.43	18.80	890	.265					

GULF OF GUAYAQUIL CRUISE 6102 STATION 9-0 LAT. 03 08.0 S LONG. 80 35.0 W DATE 31 AUG 1961
 TIME 0845- WEATHER 2 CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SE TEMP. 23.2 C AIR TEMP.(WET) 21.2 C AIR TEMP.(DRY) 23.3 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 758 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* OXYGEN O/00	* PO4	NO2	SI04
0	23.38	29.60	19.77	797		MGC/M3	ML/L SAT.	ML/L	* MICROGRM-AT/L *	
4.0	23.88	29.67	19.68	806						

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* OXYGEN O/00	* PO4	NO2	SI04
0	23.38	29.60	19.77	797	0	MGC/M3	ML/L SAT.	ML/L	* MICROGRM-AT/L *	
2.5	23.69	29.64	19.71	803	.020					

GULF OF GUAYAQUIL CRUISE 6102 STATION V-1 LAT. 02 34.0 S LONG. 80 06.5 W DATE 31 AUG 1961
 TIME 1200- WEATHER 1 CLOUD COVER 1/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 24.2 C AIR TEMP.(WET) 21.7 C AIR TEMP.(DRY) 24.0 C
 RELATIVE HUMIDITY 80 0/0 BAROMETER 757 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* OXYGEN O/00	* PO4	NO2	SI04
0	21.78	33.31	23.02	486		MGC/M3	ML/L SAT.	ML/L	* MICROGRM-AT/L *	
4.0	21.28	33.46	23.27	462						
6.0	21.08	33.24	23.16	473						

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* OXYGEN O/00	* PO4	NO2	SI04
0	21.78	33.31	23.02	486	0	MGC/M3	ML/L SAT.	ML/L	* MICROGRM-AT/L *	
2.5	21.45	33.41	23.18	470	.012					
5.0	21.17	33.34	23.21	468	.024					

GULF OF GUAYAQUIL CRUISE 6102 STATION N-1 LAT. 03 02.9 S LONG. 80 07.0 W DATE 31 AUG 1961
 TIME 1410- WEATHER 0 CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 20.6 C AIR TEMP.(WET) 21.9 C AIR TEMP.(DRY) 24.2 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 757 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AOU ML/L	NO2 MICROGRM-AT/L *
0	21.98	33.22	22.89	497					S104
4.0	21.55	33.15	22.96	491					
8.0	21.78	33.30	23.01	486					

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AOU ML/L	NO2 MICROGRM-AT/L *
0	21.98	33.22	22.89	497	0				S104
2.5	21.70	33.17	22.94	493	.012				
5.0	21.62	33.20	22.97	490	.025				
7.5	21.76	33.29	23.00	487	.037				

GULF OF GUAYAQUIL CRUISE 6102 STATION 0-1 LAT. 03 05.8 S LONG. 80 05.5 W DATE 31 AUG 1961
 TIME 1530- WEATHER 0 CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 21.1 C AIR TEMP.(WET) 20.8 C AIR TEMP.(DRY) 22.9 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER 756 MM

OBSERVED		AND COMPUTED		VALUES AT OBSERVED		DEPTH S		
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OXYGEN O/00 SAT. ML/L	* PO4 NO2 MICROGRM-AT/L *
0	22.98	33.24	22.63	523				
4.0	22.48	33.10	22.66	519				
8.0	22.36	33.13	22.72	514				

INTERPOLATED		AND COMPUTED		VALUES AT STANDARD		DEPTH S		
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OXYGEN O/00 SAT. ML/L	* PO4 NO2 MICROGRM-AT/L *
0	22.98	33.24	22.63	523	0			
2.5	22.65	33.15	22.65	521	.013			
5.0	22.44	33.11	22.68	518	.026			
7.5	22.37	33.13	22.71	515	.039			

GULF OF GUAYAQUIL CRUISE 6102 STATION P-1 LAT. 03 08.6 S LONG. 80 04.0 W DATE 31 AUG 1961
 TIME 1630- WEATHER 1 CLOUD COVER 9/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 19.6 C AIR TEMP.(WET) 20.3 C AIR TEMP.(DRY) 21.6 C
 RELATIVE HUMIDITY 91 0/0 BAROMETER 756 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OXYGEN O/00 AOU	PO4	NO2	SI04
0	22.48	32.81	22.44	540						
4.0	23.27	32.86	22.26	558						
8.0	22.95	32.79	22.30	555						

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OXYGEN O/00 AOU	PO4	NO2	SI04
0	22.48	32.81	22.44	540	0					
2.5	22.99	32.84	22.32	552	.014					
5.0	23.17	32.84	22.27	557	.028					
7.5	22.98	32.80	22.29	555	.041					

GULF OF GUAYAQUIL CRUISE 6102 STATION Q-1 LAT. 03 11.9 S LONG. 80 16.3 W DATE 31 AUG 1961
 TIME 1720- WEATHER 1 CLOUD COVER 9/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 19.2 C AIR TEMP.(WET) 20.4 C AIR TEMP.(DRY) 21.7 C
 RELATIVE HUMIDITY 91 0/0 BAROMETER 756 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* O X Y G E N * O/00 AOU	PO4	NO2	SI04
0	21.88	32.88	22.66	519		MGC/M3	ML/L SAT. ML/L			* MICROGRM-AT/L *
4.0	23.02	32.77	22.26	558						
8.0	22.88	32.79	22.32	553						

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* O X Y G E N * O/00 AOU	PO4	NO2	SI04
0	21.88	32.88	22.66	519	0	MGC/M3	ML/L SAT. ML/L			* MICROGRM-AT/L *
2.5	22.62	32.81	22.40	544	.013					
5.0	22.98	32.78	22.28	556	.027					
7.5	22.89	32.79	22.31	553	.041					

GULF OF GUAYAQUIL CRUISE 6102 STATION F- 1 LAT. 02 44.3 S LONG. 79 54.0 W DATE 1 SEP 1961
 TIME 1315- WEATHER 0 CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 25.0 C AIR TEMP.(WET) 23.2 C AIR TEMP.(DRY) 27.2 C
 RELATIVE HUMIDITY 71 0/0 BAROMETER 757 MM

OBSERVED		AND COMPUTED		VALUES AT OBSERVED		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OXYGEN O/00 AOU ML/L SAT. ML/L * MICROGRM-AT/L *
0	26.18	31.04	20.02	773			
6.0	24.36	31.62	21.01	678			
12.0	23.82	31.91	21.38	642			

INTERPOLATED		AND COMPUTED		VALUES AT STANDARD		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OXYGEN O/00 AOU ML/L SAT. ML/L * MICROGRM-AT/L *
0	26.18	31.04	20.02	773	0		
2.5	25.48	31.28	20.42	735	.019		
5.0	24.61	31.54	20.87	691	.037		
7.5	24.19	31.71	21.12	667	.054		
10.0	23.97	31.83	21.28	652	.070		

GULF OF GUAYAQUIL CRUISE 6104 STATION 16-1 LAT. 03 18.0 S LONG. 80 27.0 W DATE 26 SEP 1961
 TIME 2015- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 22.8 C AIR TEMP.(WET) 20.7 C AIR TEMP.(DRY) 21.4 C
 RELATIVE HUMIDITY 0/0 BAROMETER 757 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTH S	
DEPTH	TEMP.	SAL.	SIG-T	THERMO	TOTAL	* O X Y G E N	* P04	NO2	S104
METERS	DEG C	O/00	G/L	ANOMALY	CO2	O/00	ACU		
				CL/T	MGC/M3	ML/L	SAT.	ML/L	* MICROGRM-AT/L *
0	22.76					3.65			
5.0	22.74					4.45			
10.0	22.72					3.41			
20.0	22.51					4.27			

INTERPOLATED		AND COMPUTED		VALUES		AT STANDARD		DEPTH S	
DEPTH	TEMP.	SAL.	SIG-T	THERMO	TOTAL	* O X Y G E N	* P04	NO2	S104
METERS	DEG C	O/00	G/L	ANOMALY	CO2	O/00	ACU		
				CL/T	MGC/M3	ML/L	SAT.	ML/L	* MICROGRM-AT/L *
0						3.65			
2.5						4.05			
5.0						4.45			
7.5						3.93			
10.0						3.41			
15.0						3.84			
20.0						4.27			

GULF OF GUAYAQUIL CRUISE 6104 STATION 15-1 LAT. 03 23.0 S LONG. 80 35.0 W DATE 27 SEP 1961
 TIME 0015- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 22.7 C AIR TEMP.(WET) 19.9 C AIR TEMP.(DRY) 21.1 C
 RELATIVE HUMIDITY 0/0 BAROMETER 757 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS										
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4	NO2	SI04
0	22.65	33.89	23.21	467			72			
5.0	22.68	33.91	23.22	466			65			
10.0	22.63	33.93	23.25	464			78			
20.0	22.60	33.87	23.21	467			79			
30.0	22.60	33.91	23.24	464			72			
50.0		32.99					3.46			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS										
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4	NO2	SI04
0	22.65	33.89	23.21	467	0		72			
2.5	22.67	33.90	23.22	467	.012		68			
5.0	22.68	33.91	23.22	466	.023		65			
7.5	22.65	33.92	23.24	465	.035		71			
10.0	22.63	33.93	23.25	464	.047		78			
15.0	22.61	33.89	23.23	466	.070		78			
20.0	22.60	33.87	23.21	467	.093		79			
25.0	22.60	33.89	23.23	465	.117		76			
30.0	22.60	33.91	23.24	464	.140		72			

GULF OF GUAYAQUIL CRUISE 6104 STATION 14-1 LAT. 03 29.0 S LONG. 80 43.0 W DATE 27 SEP 1961
 TIME 0155- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 22.5 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4	NO2	SI04
0	22.49	33.89	23.26	463			93			
5.0	22.59	33.89	23.23	465			85			
10.0	22.58	33.58	23.00	487			85			
20.0	18.25	34.63	24.95	302			55			
30.0	17.62	33.09	23.92	399			93			
50.0	22.40	33.95	23.33	456			81			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4	NO2	SI04
0	22.49	33.89	23.26	463	0		93			
2.5	22.56	33.89	23.24	465	.012		89			
5.0	22.59	33.89	23.23	465	.023		85			
7.5	22.59	33.71	23.10	478	.035		85			
10.0	22.58	33.58	23.00	487	.047		85			
15.0	20.41	34.10	23.99	393	.069		70			
20.0	18.25	34.63	24.94	302	.087		55			
25.0	17.90	33.78	24.38	355	.103		74			
30.0	17.62	33.09	23.92	399	.122		93			
50.0	22.40	33.95	23.33	456	.208		81			

GULF OF GUAYAQUIL CRUISE 6104 STATION 13- 1 LAT. 03 34.0 S LONG. 80 51.0 W DATE 27 SEP 1961
 TIME 0405- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 24.2 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4 ML/L	NO2 ML/L	SIU4 ML/L
0	24.18	33.75					4.70			
5.0	22.37	33.80	23.22	466			4.66	96	.20	
10.0	22.38	33.77	23.20	468			5.72	118	-.86	
20.0	19.79	34.31	24.31	362			4.45	88	.61	
30.0	17.29	34.92	25.40	258			2.49	47	2.78	
50.0	14.27	34.99	26.14	188			1.26	23	4.33	
75.0	19.71	34.58	24.54	341			3.81	75	1.25	

I N T E R P O L A T E D			A N D			C O M P U T E D			V A L U E S			A T			S T A N D A R D			D E P T H S		
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* ML/L	O ML/L	X SAT.	Y O/00	G ML/L	E ADU	N ML/L	* ML/L	P04	NO2	SI04			
0	24.18	33.75	22.66	519	0		4.70													
2.5	23.27	33.78	22.95	492	.013		4.68													
5.0	22.37	33.80	23.22	466	.025		4.66		96					.20						
7.5	22.38	33.78	23.21	467	.036		5.19		107					-.33						
10.0	22.38	33.77	23.20	468	.048		5.72		118					-.86						
15.0	20.88	34.07	23.84	407	.070		5.08		103					-.13						
20.0	19.79	34.31	24.31	362	.089		4.45		88					.61						
25.0	18.42	34.64	24.91	305	.106		3.47		68					1.70						
30.0	17.29	34.92	25.40	258	.120		2.49		47					2.78						
50.0	14.27	34.99	26.14	188	.165		1.26		23					4.33						
75.0	19.71	34.58	24.54	341	.232		3.81		75					1.25						

GULF OF GUAYAQUIL CRUISE 6104 STATION 11-1 LAT. 03 21.0 S LONG. 80 51.0 W DATE 27 SEP 1961
 TIME 0630- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 22.5 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y GEN O/00 SAT. ML/L	* P04 AU	NO2	SI04
0	22.53	33.55	22.99	488			4.99 103			
5.0	22.52	33.58	23.02	486			5.03 104			
10.0	22.49	33.60	23.04	484			5.36 110			
20.0	20.58	34.09	23.94	398			5.01 100			
30.0	17.69	33.77	24.43	351			5.04 96			
50.0	20.03	34.49	24.38	355			4.11 82			
75.0		34.99					1.93			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y GEN O/00 SAT. ML/L	* P04 AU	NO2	SI04
0	22.53	33.55	22.99	488	0		4.99 103			
2.5	22.53	33.56	23.00	488	.012		5.01 103			
5.0	22.52	33.58	23.02	486	.024		5.03 104			
7.5	22.51	33.59	23.03	485	.037		5.20 107			
10.0	22.49	33.60	23.04	484	.049		5.36 110			
15.0	21.84	33.84	23.41	448	.072		5.18 105			
20.0	20.58	34.09	23.93	398	.093		5.01 100			
25.0	19.13	33.93	24.19	374	.112		5.03 98			
30.0	17.69	33.77	24.43	351	.131		5.04 96			
50.0	20.03	34.49	24.38	355	.202		4.11 82			

GULF OF GUAYAQUIL CRUISE 6104 STATION 7-1 LAT. 03 08.0 S LONG. 80 51.0 W DATE 27 SEP 1961
 TIME 0655- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 22.5 C AIR TEMP.(WET) 19.3 C AIR TEMP.(DRY) 20.6 C
 RELATIVE HUMIDITY 0/0 BAROMETER 756 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTH S			
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX ML/L	YGEN O/00 SAT.	* PO4 ML/L AQU	NO2 ML/L	SI04 MICROGRAM-AT/L *
0	22.51	33.58	23.02	486			4.85	100	.00		
5.0	22.42	33.62	23.07	480			5.03	104	-.17		
10.0	22.44	33.58	23.04	484			4.93	102	-.07		
20.0	22.38	33.93	23.32	457			5.05	104	-.20		
30.0	18.78	34.60	24.79	317			3.20	62	1.94		
50.0	14.98	35.07	26.05	197			1.95	35	3.56		
75.0	14.28	34.99	26.14	188			1.33	24	4.26		

I N T E R P O L A T E D			A N D			C O M P U T E D			V A L U E S			A T			S T A N D A R D			D E P T H S		
DEPTH	TEMP.	SAL.	SIG-T	THERMO	DYNAMIC	TOTAL	* O X	Y G E N	* P O 4	N O 2	S I O 4	* M I C R O G R M - A T / L	* A U	* M L / L	* M L / L	* M L / L	* M L / L	* M L / L	* M L / L	
METERS	DEG C	O / O O	G / L	A N O M A L Y	H E I G H T	C O 2	M L / L	O / O O	S A T .	S A T .	S A T .	S A T .	S A T .	S A T .	S A T .	S A T .	S A T .	S A T .	S A T .	
				C L / T		M G C / M 3														
0	22.51	33.58	23.02	486	0		4.85	100												
2.5	22.47	33.60	23.05	483	.012		4.94	102												
5.0	22.42	33.62	23.07	480	.024		5.03	104												
7.5	22.43	33.60	23.05	482	.036		4.98	103												
10.0	22.44	33.58	23.04	484	.048		4.93	102												
15.0	22.41	33.62	23.08	480	.072		4.99	103												
20.0	22.38	33.93	23.32	457	.096		5.05	104												
25.0	20.58	34.26	24.07	385	.117		4.13	83												
30.0	18.78	34.60	24.79	317	.135		3.20	62												
50.0	14.98	35.07	26.05	197	.186		1.95	35												
75.0	14.28	34.99	26.14	188	.235		1.33	24												

GULF OF GUAYAQUIL CRUISE 6104 STATION 4-1 LAT. 02 52.0 S LONG. 80 27.0 W DATE 27 SEP 1961
 TIME 0955- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 25.2 C AIR TEMP.(WET) C AIR TEMP.(DRY) 4.4 C
 RELATIVE HUMIDITY 0/0 BAROMETER 756 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 NO2 MICROGRM-AT/L *
0	25.24	33.39	22.08	576			96 .21	
5.0	23.70	33.39	22.53	532			94 .26	
10.0	23.75	33.40	22.53	533			97 .15	
15.0	23.40	33.39	22.62	524			95 .24	

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 NO2 MICROGRM-AT/L *
0	25.24	33.39	22.08	576	0		96 .21	
2.5	24.47	33.39	22.31	554	.014		95 .23	
5.0	23.70	33.39	22.53	532	.028		94 .26	
7.5	23.73	33.40	22.53	532	.041		96 .21	
10.0	23.75	33.40	22.53	533	.054		97 .15	
15.0	23.40	33.39	22.62	524	.081		95 .24	

GULF OF GUAYAQUIL CRUISE 6106 STATION A-1 LAT. 02 44.2 S LONG. 80 11.5 W DATE 18 OCT 1961
 TIME 0658- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 25.3 C AIR TEMP. (WET) C AIR TEMP. (DRY) 22.4 C
 RELATIVE HUMIDITY 0/0 BAROMETER 754 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* ADU ML/L	P04 NO2 MICROGRM-AT/L *
0	25.10	32.29	21.29	651			4.55	97	.14
5.0	25.21	31.58	20.72	705			4.62	98	.08
10.0	25.22	31.58	20.72	706			4.91	104	-.21
20.0	25.21	31.67	20.79	699			4.93	105	-.23
30.0	25.22 1	31.36					4.33		
40.0	25.25 1	31.64					4.30		
50.0	25.27	31.53	20.67	711			4.28	91	.42

COMPUTED VALUES AT STANDARD DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* ADU ML/L	P04 NO2 MICROGRM-AT/L *
0	25.10	32.29	21.29	651	0		4.55	97	.14
2.5	25.16	31.93	21.01	678	.017		4.59	98	.11
5.0	25.21	31.58	20.72	705	.034		4.62	98	.08
7.5	25.22	31.58	20.72	706	.052		4.77	101	-.06
10.0	25.22	31.58	20.72	706	.069		4.91	104	-.21
15.0	25.21	31.62	20.75	702	.104		4.92	105	-.22
20.0	25.21	31.67	20.79	699	.140		4.93	105	-.23
25.0	25.22	31.64	20.77	701	.175		4.63	103	-.12
30.0	25.22	31.62	20.75	703	.210		4.33	100	-.01
50.0	25.27	31.53	20.67	711	.351		4.28	91	.42

GULF OF GUAYAQUIL CRUISE 6106 STATION B-1 LAT. 02 42.4 S LONG. 80 11.5 W DATE 18 OCT 1961
 TIME 0753- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SE TEMP. 25.3 C AIR TEMP.(WET) C AIR TEMP.(DRY) 23.1 C
 RELATIVE HUMIDITY 0/0 BAROMETER 754 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	P04 NO2 * MICROGRM-AT/L #	SI04
0	25.13	31.35	20.57	720			5.67 120		
2.5	25.14	31.62	20.77	701			5.50 117		
5.0	25.16	31.55	20.72	706			4.42 94		
10.0	25.19	31.56	20.71	706			4.46 95		
20.0	29.40	31.55					4.42		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	P04 NO2 * MICROGRM-AT/L #	SI04
0	25.13	31.35	20.57	720	0		5.67 120		
2.5	25.14	31.62	20.77	701	.018		5.50 117		
5.0	25.16	31.55	20.71	706	.035		4.42 94		
7.5	25.18	31.55	20.71	706	.053		4.44 94		
10.0	25.19	31.56	20.71	706	.071		4.46 95		

GULF OF GUAYAQUIL CRUISE 6106 STATION C-1 LAT. 02 40.8 S LONG. 80 07.4 W DATE 18 OCT 1961
 TIME 0835- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY KT (M/SEC) WIND DIR. -
 SECCHI DISK DEPTH M SEA TEMP. 25.0 C AIR TEMP.(WET) C AIR TEMP.(DRY) 23.3 C
 RELATIVE HUMIDITY 0/0 BAROMETER 754 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* ML/L	SAT. ML/L	AOU ML/L	P04	N02	S104
0	32.61	31.58	18.28	941				4.60	110	-.41			
2.5	25.20	31.73	20.84	694				4.55	97	.15			
5.0	25.22	31.49	20.65	712				4.48	95	.23			
7.5	25.22	31.53	20.68	709				4.47	95	.23			
10.0	25.23	31.71	20.81	697				4.59	98	.11			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* ML/L	SAT. ML/L	AOU ML/L	P04	N02	S104
0	32.61	31.58	18.28	941	0			4.60	110	-.41			
2.5	25.20	31.73	20.84	694	.020			4.55	97	.15			
5.0	25.22	31.49	20.65	712	.038			4.48	95	.23			
7.5	25.22	31.53	20.68	709	.056			4.47	95	.23			
10.0	25.23	31.71	20.81	697	.073			4.59	98	.11			

GULF OF GUAYAQUIL CRUISE 6106 STATION D-1 LAT. 02 40.0 S LONG. 80 02.3 W DATE 18 OCT 1961
 TIME 0910- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 25.0 C AIR TEMP.(WET) C AIR TEMP.(DRY) 24.4 C
 RELATIVE HUMIDITY 0/0 BAROMETER 754 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN * O/00 SAT. ML/L	PO4	NO2	SI04
0	25.31	31.67					4.48			
2.5	25.37	31.73	20.79	699			4.53	97	.16	
5.0	25.32	31.36	20.52	725			4.53	96	.17	

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN * O/00 SAT. ML/L	PO4	NO2	SI04
0	25.31	27.56	17.67		0		4.48			
2.5	25.37	31.73	20.79	699	.021		4.53	97	.16	
5.0	25.32	31.36	20.52	725	.039		4.53	96	.17	

GULF OF GUAYAQUIL CRUISE 6106 STATION E-1 LAT. 02 41.6 S LONG. 79 58.8 W DATE 18 OCT 1961
 TIME 1000- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 25.4 C AIR TEMP. (WET) C AIR TEMP. (DRY) 24.8 C
 RELATIVE HUMIDITY 0/0 BAROMETER 753 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTHS	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00	* PO4	NO2
0	25.62	31.26	20.36	741			SAT. ML/L	* MICROGRM-AT/L	* SIO4
2.5	25.41	31.17	20.35	741		4.67	100	.01	
5.0	25.31	31.15	20.37	739		4.70	100	.00	
7.5	25.35	31.49	20.61	716		4.61	98	.10	
						4.61	98	.09	

INTERPOLATED		AND COMPUTED		VALUES		AT STANDARD		DEPTHS	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00	* PO4	NO2
0	25.62	31.26	20.36	741	0		SAT. ML/L	* MICROGRM-AT/L	* SIO4
2.5	25.41	31.17	20.35	741	.019	4.67	100	.01	
5.0	25.31	31.15	20.37	739	.037	4.70	100	.00	
7.5	25.35	31.49	20.61	716	.055	4.61	98	.10	
						4.61	98	.09	

GULF OF GUAYAQUIL CRUISE 6106 STATION F-1 LAT. 02 44.3 S LONG. 79 54.0 W DATE 18 OCT 1961
 TIME 1110- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 25.7 C AIR TEMP. (WET) C AIR TEMP. (DRY) 26.7 C
 RELATIVE HUMIDITY 0/0 BAROMETER 753 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* P04 AOU ML/L	* NO2 MICROGRM-AT/L
0		30.95					4.62		
5.0	25.49	32.56	21.37	643			99	.05	
10.0	25.41	32.57	21.41	640			95	.24	
15.0	25.40	32.23	21.15	664			98	.08	
20.0	25.47	32.27	21.16	663			95	.23	

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* P04 AOU ML/L	* NO2 MICROGRM-AT/L
0	25.53	30.95	20.15	760	0		4.62		
2.5	25.51	31.75	20.76	702	.018		4.61		
5.0	25.49	32.56	21.37	643	.035		99	.05	
7.5	25.45	32.56	21.39	641	.051		97	.15	
10.0	25.41	32.57	21.41	640	.067		95	.24	
15.0	25.40	32.23	21.15	664	.100		98	.08	
20.0	25.47	32.27	21.16	663	.133		95	.23	

GULF OF GUAYAQUIL CRUISE 6106 STATION G-1 LAT. 02 45.5 S LONG. 79 51.8 W DATE 18 OCT 1961
 TIME 1205- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 25.6 C AIR TEMP.(WET) C AIR TEMP.(DRY) 26.7 C
 RELATIVE HUMIDITY 0/0 BAROMETER 753 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* O X ML/L	Y GEN O/00	* AQU	PO4	NO2	SI04
0	25.74	33.10	21.70	611		MGC/M3	4.73	102	ML/L	* MICROGRM-AT/L		*
2.5	25.50	33.12	21.79	603			4.85	105				
5.0	25.41	32.90	21.66	616			4.78	103				
10.0	24.36	32.90	21.97	586			4.76	101				

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* O X ML/L	Y GEN O/00	* AQU	PO4	NO2	SI04
0	25.74	33.10	21.70	611	0	MGC/M3	4.73	102	ML/L	* MICROGRM-AT/L		*
2.5	25.50	33.12	21.79	603	.015		4.85	105				
5.0	25.41	32.90	21.66	616	.030		4.78	103				
7.5	24.88	32.90	21.81	601	.046		4.77	102				
10.0	24.36	32.90	21.97	586	.060		4.76	101				

GULF OF GUAYAQUIL CRUISE 6106 STATION H-1 LAT. 02 46.4 S LONG. 79 50.0 W DATE 18 OCT 1961
 TIME 1220- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY KT (M/SEC) WIND DIR. -
 SECCHI DISK DEPTH M SEA TEMP. 25.1 C AIR TEMP.(WET) C AIR TEMP.(DRY) 25.3 C
 RELATIVE HUMIDITY 0/0 BAROMETER 753 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00	PO4	NO2	SI04
0	25.50	32.75	21.51	630			SAT. ML/L			* MICROGRM-AT/L *
5.0	24.65	32.52	21.60	622			104 -0.20	99		.06

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00	PO4	NO2	SI04
0	25.50	32.75	21.51	630	0		SAT. ML/L			* MICROGRM-AT/L *
2.5	25.08	32.63	21.56	625	.016		104 -0.20			
5.0	24.65	32.52	21.60	622	.031		102 -0.07	99		.06

GULF OF GUAYAQUIL CRUISE 6106 STATION I-1 LAT. 02 53.2 S LONG. 79 55.2 W DATE 18 OCT 1961
 TIME 1420- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 25.7 C AIR TEMP.(WET) C AIR TEMP.(DRY) 23.9 C
 RELATIVE HUMIDITY 0/0 BAROMETER 752 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	25.00	32.63	21.58	624			SAT. 102	ML/L 4.79	ML/L -.10	* MICROGRM-AT/L *
5.0	25.50	32.68	21.46	635			98	4.55	.10	
10.0	24.44	32.68	21.78	604			93	4.40	.33	

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	25.00	32.63	21.58	624	0		SAT. 102	ML/L 4.79	ML/L -.10	* MICROGRM-AT/L *
2.5	25.35	32.66	21.50	631	.016		100	4.67	-.00	
5.0	25.50	32.68	21.46	635	.032		98	4.55	.10	
7.5	24.97	32.68	21.62	619	.047		95	4.47	.21	
10.0	24.44	32.68	21.78	604	.062		93	4.40	.33	

GULF OF GUAYAQUIL CRUISE 6106 STATION J-1 LAT. 03 03.3 S LONG. 79 54.8 W DATE 18 OCT 1961
 TIME 1653- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY KT (M/SEC) WIND DIR. -
 SECCHI DISK DEPTH M SEA TEMP. 24.4 C AIR TEMP.(WET) C AIR TEMP.(DRY) 24.2 C
 RELATIVE HUMIDITY 0/0 BAROMETER 752 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	P04 NO2 * MICROGRM-AT/L *	S104
0	24.23	32.54	21.74	608			94 .28		
5.0	25.49	32.75	21.52	629			96 .17		
10.0	26.90	32.72	21.06	673			90 .44		
15.0	23.86	32.70	21.97	586			87 .60		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	P04 NO2 * MICROGRM-AT/L *	S104
0	24.23	32.54	21.74	608	0		94 .28		
2.5	25.11	32.68	21.58	623	.015		95 .22		
5.0	25.49	32.75	21.52	629	.031		96 .17		
7.5	26.30	32.73	21.25	655	.047		93 .30		
10.0	26.90	32.72	21.06	673	.064		90 .44		
15.0	23.86	32.70	21.97	586	.095		87 .60		

GULF OF GUAYAQUIL CRUISE 6106 STATION K-1 LAT. 03 02.1 S LONG. 79 57.2 W DATE 18 OCT 1961
 TIME 1623- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP. (WET) C AIR TEMP. (DRY) C
 RELATIVE HUMIDITY O/O BAROMETER MM

U R S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N ML/L	0/00 SAT.	* AOU ML/L	P04	NO2	SIO4
0	24.18	32.86	21.99	584			4.86	102	-.12			
5.0	25.49	32.66	21.45	636			4.79	103	-.14			
10.0	26.73	32.75	21.13	666			4.50	99	.06			

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N ML/L	0/00 SAT.	* AOU ML/L	P04	NO2	SIO4
0	24.18	32.86	21.99	584	0		4.86	102	-.12			
2.5	24.84	32.76	21.72	610	.015		4.82	103	-.13			
5.0	25.49	32.66	21.45	636	.030		4.79	103	-.14			
7.5	26.11	32.70	21.29	651	.047		4.65	101	-.04			
10.0	26.73	32.75	21.13	666	.063		4.50	99	.06			

GULF OF GUAYAQUIL CRUISE 6106 STATION L-1 LAT. 03 00.2 S LONG. 80 00.5 W DATE 18 OCT 1961
 TIME 1658- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	24.93	32.88	21.79	604		ML/L SAT. ML/L	5.04 108			* MICROGRM-AT/L *
5.0		32.86				5.06	-0.36			
10.0	23.84	32.90	22.12	571		4.48	94			.29

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	24.93	32.88	21.79	604	0	ML/L SAT. ML/L	5.04 108			* MICROGRM-AT/L *
2.5	24.83	32.88	21.82	601	.015	5.05 104	-0.19			
5.0	24.37	32.89	21.96	587	.030	5.06 101	-0.03			
7.5	24.06	32.90	22.05	578	.044	4.77 97	.13			
10.0	23.84	32.90	22.12	571	.059	4.48 94	.29			

GULF OF GUAYAQUIL CRUISE 6106 STATION M-1 LAT. 02 58.3 S LONG. 80 03.5 W DATE 18 OCT 1961
 TIME 1723- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. -
 SECCHI DISK DEPTH M SE/ TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AUU ML/L	NO2 MICROGRM-AT/L *
0	25.78	31.69	20.63	714			5.06 109	-.40	
5.0	25.59	32.01	20.93	686			4.43 95	.23	
10.0	25.40	32.41	21.29	651			4.25 91	.41	
15.0	25.23	32.50	21.41	640			4.06 87	.61	

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AUU ML/L	NO2 MICROGRM-AT/L *
0	25.78	31.69	20.63	714	0		5.06 109	-.40	
2.5	25.69	31.85	20.78	700	.018		4.74 102	-.09	
5.0	25.59	32.01	20.93	686	.035		4.43 95	.23	
7.5	25.50	32.21	21.11	668	.052		4.34 93	.32	
10.0	25.40	32.41	21.29	651	.068		4.25 91	.41	
15.0	25.23	32.50	21.41	640	.101		4.06 87	.61	

GULF OF GUAYAQUIL CRUISE 6106 STATION N-1 LAT. 03 02.9 S LONG. 80 07.0 W DATE 19 OCT 1961
 TIME 1453- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 24.7 C AIR TEMP.(WET) C AIR TEMP.(DRY) 23.1 C
 RELATIVE HUMIDITY 0/0 BAROMETER 752 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT.	* PO4 ML/L	* MICROGRM-AT/L *	NO2 ML/L	SIO4 ML/L
0	24.70	32.94	21.90	593			94	.30			
5.0	24.09	33.06	22.17	567			90	.48			
10.0	23.79	33.49	22.58	527			86	.67			
20.0	22.90	33.58	22.91	496			80	.98			
30.0	18.28	34.29	24.68	327			38	3.25			
50.0	15.22	34.70	25.71	229			19	4.44			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT.	* PO4 ML/L	* MICROGRM-AT/L *	NO2 ML/L	SIO4 ML/L
0	24.70	32.94	21.90	593	0		94	.30			
2.5	24.44	33.00	22.02	581	.015		92	.39			
5.0	24.09	33.06	22.17	567	.029		90	.48			
7.5	23.95	33.20	22.32	552	.043		88	.58			
10.0	23.79	33.49	22.58	527	.057		86	.67			
15.0	23.39	33.53	22.73	513	.083		83	.83			
20.0	22.90	33.58	22.91	496	.108		80	.98			
25.0	20.59	33.93	23.81	410	.131		59	2.11			
30.0	18.28	34.29	24.68	327	.149		38	3.25			
50.0	15.22	34.70	25.71	229	.205		19	4.44			

GULF OF GUAYAQUIL CRUISE 6106 STATION 0-1 LAT. 03 05.8 S LONG. 80 05.5 W DATE 19 OCT 1961
 TIME 1603- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 23.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) 23.4 C
 RELATIVE HUMIDITY 0/0 BAROMETER 752 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* OX Y GEN O/00	* PO4	NO2	SI04
0	23.79	35.44	24.06	387		MGC/M3	ML/L SAT. 94	ML/L .29		* MICROGRM-AT/L *
5.0	23.52	35.44	24.14	379			4.40 93	4.38 .33		
10.0	23.43	33.62	22.79	508			4.33 91	4.33 .45		
20.0	21.78	33.80	23.39	450			3.84 78	3.84 1.06		
30.0	18.13	34.31	24.73	322			1.88 36	1.88 3.33		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* OX Y GEN O/00	* PO4	NO2	SI04
0	23.79	35.44	24.06	387	0	MGC/M3	ML/L SAT. 94	ML/L .29		* MICROGRM-AT/L *
2.5	23.66	35.44	24.09	383	.010		4.39 93	4.31 .31		
5.0	23.52	35.44	24.13	379	.019		4.38 93	4.33 .33		
7.5	23.48	34.40	23.36	453	.030		4.35 92	4.39 .39		
10.0	23.43	33.62	22.79	508	.042		4.33 91	4.45 .45		
15.0	22.80	33.65	22.99	488	.067		4.08 84	4.76 .76		
20.0	21.78	33.80	23.39	450	.090		3.84 78	1.06 1.06		
25.0	19.95	34.05	24.07	385	.111		2.86 57	2.20 2.20		
30.0	18.13	34.31	24.73	322	.129		1.88 36	3.33 3.33		

GULF OF GUAYAQUIL CRUISE 6106 STATION 16-1 LAT. 03 18.0 S LONG. 80 27.0 W DATE 19 OCT 1961
 TIME 1728- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY KT (M/SEC) WIND DIR. -
 SECCHI DISK DEPTH M SEA TEMP. 22.9 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 751 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AUQ ML/L	NO2 MICROGRM-AT/L *	SI04
0	23.11	33.75	22.98	490			97	.16		
5.0	23.08	33.49	22.79	508			90	.46		
10.0	23.00	33.64	22.93	495			96	.19		
20.0	22.71	33.66	23.02	485			90	.47		
30.0	20.12	34.05	24.03	389			59	2.09		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AUQ ML/L	NO2 MICROGRM-AT/L *	SI04
0	23.11	33.75	22.98	490	0		97	.16		
2.5	23.10	33.57	22.84	502	.012		94	.31		
5.0	23.08	33.49	22.79	508	.025		90	.46		
7.5	23.04	33.54	22.84	503	.038		93	.32		
10.0	23.00	33.64	22.93	495	.050		96	.19		
15.0	22.86	33.65	22.97	490	.075		93	.33		
20.0	22.71	33.66	23.02	485	.099		90	.47		
25.0	21.42	33.85	23.53	437	.122		74	1.28		
30.0	20.12	34.05	24.03	389	.143		59	2.09		

GULF OF GUAYAQUIL CRUISE 6106 STATION 15-1 LAT. 03 23.0 S LONG. 80 35.0 W DATE 20 OCT 1961
 TIME 0800- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 21.7 C AIR TEMP.(WET) C AIR TEMP.(DRY) 21.2 C
 RELATIVE HUMIDITY 0/0 BAROMETER 751 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* AOU ML/L	* NO2 MICROGRM-AT/L
0	22.82	33.78	23.08	480			4.58 95	.24	
5.0	22.80	33.69	23.02	485			4.48 93	.34	
10.0	22.79	33.78	23.09	479			4.53 94	.29	
20.0	20.86	33.84	23.67	423			3.77 76	1.21	
30.0	19.69	34.31	24.34	360			3.76 74	1.31	
40.0	16.21	34.74	25.52	247			1.23 23	4.16	

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* AOU ML/L	* NO2 MICROGRM-AT/L
0	22.82	33.78	23.08	480	0		4.58 95	.24	
2.5	22.81	33.72	23.04	484	.012		4.53 94	.29	
5.0	22.80	33.69	23.02	485	.024		4.48 93	.34	
7.5	22.80	33.72	23.04	483	.036		4.51 93	.32	
10.0	22.79	33.78	23.09	479	.048		4.53 94	.29	
15.0	22.13	33.81	23.30	459	.072		4.15 85	.75	
20.0	20.86	33.84	23.67	423	.094		3.77 76	1.21	
25.0	20.33	34.01	23.94	398	.114		3.77 75	1.26	
30.0	19.69	34.31	24.34	360	.133		3.76 74	1.31	

GULF OF GUAYAQUIL CRUISE 6106 STATION 12-1 LAT. 03 12.0 S LONG. 80 39.0 W DATE 20 OCT 1961
 TIME 0918- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 22.2 C AIR TEMP.(WET) C AIR TEMP.(DRY) 21.4 C
 RELATIVE HUMIDITY 0/0 BAROMETER 751 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 NO2 SIO4	* MICROGRM-AT/L *
0	22.20	33.93	23.37	452			4.61		
5.0	22.13	33.31	22.92	495			4.47		
10.0	22.17	33.40	22.98	490			4.29		
20.0	21.96	33.44	23.07	481			4.40		
30.0	19.99	33.87	23.92	399			3.86		
50.0	15.34	34.52	25.55	245			.97		
70.0	14.31	34.58	25.82	219			.82		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 NO2 SIO4	* MICROGRM-AT/L *
0	22.20	33.93	23.37	452	0		4.61		
2.5	22.17	33.50	23.06	482	.012		4.54		
5.0	22.13	33.31	22.92	495	.024		4.47		
7.5	22.15	33.34	22.94	493	.036		4.38		
10.0	22.17	33.40	22.98	490	.049		4.29		
15.0	22.07	33.41	23.01	486	.073		4.35		
20.0	21.96	33.44	23.07	481	.097		4.40		
25.0	21.26	33.45	23.26	462	.121		4.13		
30.0	19.99	33.87	23.92	399	.142		3.86		
50.0	15.34	34.52	25.55	245	.207		.97		

GULF OF GUAYAQUIL CRUISE 6106 STATION 8-1 LAT. 03 08.0 S LONG. 80 43.0 W DATE 20 OCT 1961
 TIME 1118- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 21.9 C AIR TEMP.(WET) C AIR TEMP.(DRY) 20.6 C
 RELATIVE HUMIDITY 0/0 BAROMETER 751 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT. ML/L	* P O 4 ML/L	N O 2	S I O 4
0	21.90	33.48	23.11	477			91	.44		
5.0	21.84	33.35	23.03	484			94	.28		
10.0	21.81	33.31	23.01	486			92	.41		
20.0	21.40	33.78	23.48	442			91	.46		
30.0	19.38	34.27	24.39	355			74	1.34		
50.0	14.62	33.21	24.70	326			19	4.55		
70.0	14.11	33.21	24.80	315			15	4.85		
I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S										

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT. ML/L	* P O 4 ML/L	N O 2	S I O 4
0	21.90	33.48	23.11	477	0		91	.44		
2.5	21.87	33.39	23.06	482	.012		93	.36		
5.0	21.84	33.35	23.03	484	.024		94	.28		
7.5	21.83	33.33	23.02	486	.036		93	.35		
10.0	21.81	33.31	23.01	486	.048		92	.41		
15.0	21.62	33.45	23.17	471	.072		91	.43		
20.0	21.40	33.78	23.48	442	.095		91	.46		
25.0	20.64	33.96	23.82	409	.117		82	.90		
30.0	19.38	34.27	24.39	355	.136		74	1.34		
50.0	14.62	33.21	24.70	326	.204		19	4.55		

GULF OF GUAYAQUIL CRUISE 6106 STATION 6-1 LAT. 02 56.0 S LONG. 80 39.0 W DATE 20 OCT 1961
 TIME 1338- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 22.9 C AIR TEMP.(WET) C AIR TEMP.(DRY) 21.1 C
 RELATIVE HUMIDITY 0/0 BAROMETER 750 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4 AOU	NO2	SI04
0	22.82	33.62	22.96	491						
5.0	28.20	33.62	21.31	649						
10.0	22.61	33.62	23.02	485						
20.0	22.70	33.58	22.97	491						
30.0	22.59	33.64	23.04	483						
40.0	15.59	34.99	25.85	216						

I N T E R P U L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4 AOU	NO2	SI04
0	22.82	33.62	22.96	491	0					
2.5	26.58	33.62	21.83	599	.014					
5.0	28.20	33.62	21.31	649	.029					
7.5	25.40	33.62	22.20	564	.044					
10.0	22.61	33.62	23.02	485	.058					
15.0	22.66	33.60	22.99	488	.082					
20.0	22.70	33.58	22.97	491	.106					
25.0	22.64	33.61	23.01	487	.131					
30.0	22.59	33.64	23.04	483	.155					

GULF OF GUAYAQUIL CRUISE 6106 STATION 3-1 LAT. 02 46.0 S LONG. 80 35.0 W DATE 20 OCT 1961
 TIME 1508- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 22.3 C AIR TEMP.(WET) C AIR TEMP.(DRY) 22.7 C
 RELATIVE HUMIDITY 0/0 BAROMETER 749 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* P04 AUO ML/L	N02	S104
0	22.80	33.60	22.95	492			89	.55		
5.0	22.79	33.44	22.83	503			91	.43		
10.0	22.72	33.58	22.96	491			97	.16		
15.0	27.00	33.57	21.66	615			93	.30		
20.0	22.72	33.62	22.99	488			91	.45		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* P04 AUO ML/L	N02	S104
0	22.80	33.60	22.95	492	0		89	.55		
2.5	22.79	33.49	22.87	500	.012		90	.49		
5.0	22.79	33.44	22.83	503	.025		91	.43		
7.5	22.75	33.52	22.90	496	.037		94	.30		
10.0	22.72	33.58	22.96	491	.050		97	.16		
15.0	27.00	33.57	21.66	615	.077		93	.30		
20.0	22.72	33.62	22.99	488	.105		91	.45		

GULF OF GUAYAQUIL CRUISE 6106 STATION 4-1 LAT. 02 52.0 S LONG. 80 27.0 W DATE 20 OCT 1961
 TIME 1613- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 22.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) 21.1 C
 RELATIVE HUMIDITY 0/0 BAROMETER 749 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* P04 AOU ML/L	NO2 MICROGRM-AT/L *
0	23.08	33.78	23.01	487			97	.14	
5.0	23.08	33.64	22.90	497			95	.22	
10.0	23.05	33.73	22.98	489			96	.21	
15.0	23.02	33.62	22.90	497			96	.17	

INTERPOLATED		AND COMPUTED		VALUES		AT STANDARD		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* P04 AOU ML/L	NO2 MICROGRM-AT/L *
0	23.08	33.78	23.01	487	0		97	.14	
2.5	23.08	33.68	22.93	494	.012		96	.18	
5.0	23.08	33.64	22.90	497	.025		95	.22	
7.5	23.06	33.68	22.94	493	.037		95	.22	
10.0	23.05	33.73	22.98	489	.049		96	.21	
15.0	23.02	33.62	22.90	497	.074		96	.17	

GULF OF GUAYAQUIL CRUISE 6107 STATION H-1 LAT. 02 46.4 S LONG. 79 50.0 W DATE 30 OCT 1961
 TIME 0945- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 215-225 T
 SECCHI DISK DEPTH M SEA TEMP. 22.0 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* SAT. ML/L	* 73 ML/L	PO4	NO2	SI04
0	24.55	34.34	23.00	487				3.42	73			
5.0	24.85	30.61	20.10	765				3.58	75			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* SAT. ML/L	* 73 ML/L	PO4	NO2	SI04
0	24.55	34.34	23.00	487	0			3.42	73			
2.5	24.70	32.47	21.55	626	.014			3.50	74			
5.0	24.85	30.61	20.10	765	.031			3.58	75			

GULF OF GUAYAQUIL CRUISE 6107 STATION G-1 LAT. 02 45.5 S LONG. 79 51.8 W DATE 30 OCT 1961
 TIME 1015- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 215-225 T
 SECCHI DISK DEPTH M SEA TEMP. 22.2 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	24.65	31.33	20.70	707		MGC/M3	ML/L SAT.	ML/L	* MICROGRM-AT/L	*
5.0	24.75	31.53	20.82	696			82	.85		
							76	1.12		

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	24.65	31.33	20.70	707	0	MGC/M3	ML/L SAT.	ML/L	* MICROGRM-AT/L	*
2.5	24.70	31.43	20.76	702	.018		82	.85		
5.0	24.75	31.53	20.82	696	.035		79	.99		
							76	1.12		

GULF OF GUAYAQUIL CRUISE 6107 STATION F-1 LAT. 02 44.3 S LONG. 79 54.0 W DATE 30 OCT 1961
 TIME 1040- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 215-225 T
 SECCHI DISK DEPTH M SEA TEMP. 22.2 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED		AND COMPUTED		VALUES		AT GBSERVED		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* P04 AUU ML/L	N02 S104 * MICROGRM-AT/L
0	24.25	32.23	21.50	631			83	.80	
5.0	24.55	32.21	21.39	641			78	1.03	
10.0	24.52	32.23	21.42	639			92	.36	

INTERPOLATED		AND COMPUTED		VALUES		AT STANDARD		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* P04 AUU ML/L	N02 S104 * MICROGRM-AT/L
0	24.25	32.23	21.50	631	0		83	.80	
2.5	24.46	32.22	21.42	638	.016		81	.92	
5.0	24.55	32.21	21.39	641	.032		78	1.03	
7.5	24.53	32.22	21.41	640	.048		85	.69	
10.0	24.52	32.23	21.42	639	.064		92	.36	

GULF OF GUAYAQUIL CRUISE 6107 STATION E-1 LAT. 02 41.6 S LONG. 79 58.8 W DATE 30 OCT 1961
 TIME 1145- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH M SEA TEMP. 22.7 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AOU	PO4	NO2	SI04
0	24.60	32.18	21.36	645			ML/L SAT. 81			* MICROGRM-AT/L *
5.0	24.60	32.07	21.27	653			3.84 77 1.09			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AOU	PO4	NO2	SI04
0	24.60	32.18	21.36	645	0		ML/L SAT. 81			* MICROGRM-AT/L *
2.5	24.60	32.12	21.31	649	.016		3.84 79 .99			
5.0	24.60	32.07	21.27	653	.032		3.64 77 1.09			

GULF OF GUAYAQUIL CRUISE 6107 STATION D-1 LAT. 02 40.0 S LONG. 80 02.3 W DATE 30 OCT 1961
 TIME 1240- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH M SE TEMP. 22.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OXYGEN O/00	* P04	N02	SI04
0	24.65	31.49	20.82	696			ML/L SAT. 82			* MICROGRM-AT/L *
5.0	24.70	31.85	21.08	671			3.90 83			.85
							3.93			.80

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OXYGEN O/00	* P04	N02	SI04
0	24.65	31.49	20.82	696	0		ML/L SAT. 82			* MICROGRM-AT/L *
2.5	24.68	31.67	20.95	684	.017		3.90 83			.85
5.0	24.70	31.85	21.08	671	.034		3.92 83			.83
							3.93 83			.80

GULF OF GUAYAQUIL CRUISE 6107 STATION C-1 LAT. 02 40.8 S LONG. 80 07.4 W DATE 30 OCT 1961
 TIME 1305- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH M SEA TEMP. 22.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AOU	PO4	NO2	SI04
0	24.80	31.20	20.56	721			ML/L SAT. ML/L			* MICROGRM-AT/L *
5.0	24.75	31.46	20.77	701			83 .81			
10.0	24.75	31.46	20.77	701			82 .85			
							78 1.04			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AOU	PO4	NO2	SI04
0	24.80	31.20	20.56	721	0		ML/L SAT. ML/L			* MICROGRM-AT/L *
2.5	24.77	31.33	20.66	711	.018		83 .81			
5.0	24.75	31.46	20.77	701	.036		82 .85			
7.5	24.75	31.46	20.77	701	.053		80 .95			
10.0	24.75	31.46	20.77	701	.071		78 1.04			

GULF OF GUAYAQUIL CRUISE 6107 STATION B-1 LAT. 02 42.4 S LONG. 80 11.5 W DATE 30 OCT 1961
 TIME 1420- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 9KT (4.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH M SEA TEMP. 22.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* O X Y G E N * O/00	PO4	NO2	SI04
0	24.55	30.81	20.34	742		MGC/M3	ML/L SAT. ML/L	* MICROGRM-AT/L *		
5.0	24.60	30.99	20.46	731			3.90 82 .88			
10.0	24.65	30.99	20.45	732			3.87 81 .90			
20.0	24.75	31.26	20.62	715			3.95 83 .81			
							3.64 77 1.11			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* O X Y G E N * O/00	PO4	NO2	SI04
0	24.55	30.81	20.34	742	0	MGC/M3	ML/L SAT. ML/L	* MICROGRM-AT/L *		
2.5	24.58	30.90	20.40	736	.018		3.89 81 .89			
5.0	24.60	30.99	20.46	731	.037		3.87 81 .90			
7.5	24.63	30.99	20.45	731	.055		3.91 82 .86			
10.0	24.65	30.99	20.45	732	.073		3.95 83 .81			
15.0	24.70	31.12	20.53	724	.110		3.79 80 .96			
20.0	24.75	31.26	20.62	715	.146		3.64 77 1.11			

GULF OF GUAYAQUIL CRUISE 6107 STATION A-1 LAT. 02 44.2 S LONG. 80 11.5 W DATE 30 OCT 1961
 TIME 1520- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH M SEA TEMP. 22.6 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 748 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4	NO2	SI04
0	24.60	31.26	20.66	711			3.89 82 .87			
5.0	24.60	31.31	20.70	708			3.85 81 .91			
10.0	24.60	31.22	20.63	714			3.83 80 .93			
20.0	24.70	31.26	20.63	714			3.82 80 .93			
30.0	24.55	31.27	20.69	709			3.87 81 .89			
50.0	24.60	31.26	20.66	711			3.81 80 .95			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4	NO2	SI04
0	24.60	31.26	20.66	711	0		3.89 82 .87			
2.5	24.60	31.29	20.69	709	.018		3.87 81 .89			
5.0	24.60	31.31	20.70	708	.035		3.85 81 .91			
7.5	24.60	31.26	20.66	711	.053		3.84 81 .92			
10.0	24.60	31.22	20.63	714	.071		3.83 80 .93			
15.0	24.66	31.24	20.63	714	.107		3.83 80 .93			
20.0	24.70	31.26	20.63	714	.142		3.82 80 .93			
25.0	24.62	31.26	20.66	711	.178		3.85 81 .91			
30.0	24.55	31.27	20.69	709	.214		3.87 81 .89			
50.0	24.60	31.26	20.66	711	.356		3.81 80 .95			

GULF OF GUAYAQUIL CRUISE 6107 STATION A-2 LAT. 02 44.2 S LONG. 80 11.5 W DATE 31 OCT 1961
 TIME 0430- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 195-205 T
 SECCHI DISK DEPTH M SEA TEMP. 22.4 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0. BAROMETER 749 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	* MICROGRM-AT/L *	P04	NO2	SI04
0	24.35	31.44	20.87	691			3.83 80	.94			
5.0	24.35	31.44	20.87	691			3.87 81	.90			
10.0	24.39	31.44	20.86	692			3.80 80	.97			
20.0	24.45	31.42	20.83	695			3.91 82	.86			
30.0	24.45	31.44	20.84	694			3.94 83	.83			
50.0	24.45	31.46	20.86	692			3.90 82	.86			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	* MICROGRM-AT/L *	P04	NO2	SI04
0	24.35	31.44	20.87	691	0		3.83 80	.94			
2.5	24.35	31.44	20.87	691	.017		3.85 81	.92			
5.0	24.35	31.44	20.87	691	.035		3.87 81	.90			
7.5	24.37	31.44	20.87	692	.052		3.83 80	.94			
10.0	24.39	31.44	20.86	692	.069		3.80 80	.97			
15.0	24.42	31.43	20.84	694	.104		3.85 81	.91			
20.0	24.45	31.42	20.83	695	.139		3.91 82	.86			
25.0	24.45	31.43	20.84	695	.173		3.92 82	.84			
30.0	24.45	31.44	20.84	694	.208		3.94 83	.83			
50.0	24.45	31.46	20.86	692	.347		3.90 82	.86			

GULF OF GUAYAQUIL CRUISE 6107 STATION 8-2 LAT. 02 42.4 S LONG. 80 11.5 W DATE 30 OCT 1961
 TIME 0530- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 9KT (4.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 22.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 749 MM

OBSERVED		AND COMPUTED		VALUES AT OBSERVED		DEPTH S				
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OXYGEN O/00 SAT. ML/L	* P04 AUU ML/L	NO2	SIO4
0	24.40	31.24	20.71	707			83	.82		
5.0	24.35	31.22	20.71	707			80	.94		
10.0	24.45	31.08	20.57	720			83	.80		
20.0	24.50	31.40	20.80	698			81	.91		

INTERPOLATED		AND COMPUTED		VALUES AT STANDARD		DEPTH S				
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OXYGEN O/00 SAT. ML/L	* P04 AUU ML/L	NO2	SIO4
0	24.40	31.24	20.71	707	0		83	.82		
2.5	24.38	31.23	20.71	707	.018		82	.88		
5.0	24.35	31.22	20.71	707	.035		80	.94		
7.5	24.40	31.15	20.64	713	.053		82	.87		
10.0	24.45	31.08	20.57	720	.071		83	.80		
15.0	24.48	31.24	20.69	709	.107		82	.85		
20.0	24.50	31.40	20.80	698	.142		81	.91		

GULF OF GUAYAQUIL CRUISE 6107 STATION C-2 LAT. 02 40.8 S LONG. 80 07.4 W DATE 31 OCT 1961
 TIME 0605- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 22.4 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 750 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S										
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00	* P O 4	N O 2	S I O 4
0	24.40	31.58	20.96	682			ML/L SAT. ML/L			* MICROGRM-AT/L *
5.0	24.40	31.60	20.98	681			4.04 85			.72
10.0	24.40	31.62	20.99	679			4.10 86			.66
							4.01 84			.75

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S										
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00	* P O 4	N O 2	S I O 4
0	24.40	31.58	20.96	682	0		ML/L SAT. ML/L			* MICROGRM-AT/L *
2.5	24.40	31.59	20.97	682	.017		4.04 85			.72
5.0	24.40	31.60	20.98	681	.034		4.07 85			.69
7.5	24.40	31.61	20.99	680	.051		4.10 86			.66
10.0	24.40	31.62	20.99	679	.068		4.05 85			.71
							4.01 84			.75

GULF OF GUAYAQUIL CRUISE 6107 STATION D-2 LAT. 02 40.0 S LONG. 80 02.3 W DATE 31 OCT 1961
 TIME 0640- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 9KT (4.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 21.7 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 750 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* O X Y G E N * O/00	PO4	NO2	SI04
0	24.40	31.53	20.93	686		MGC/M3	ML/L SAT. ML/L			* MICROGRM-AT/L *
5.0	24.25	31.55	20.99	680			3.96 83 .81 3.95 83 .83			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* O X Y G E N * O/00	PO4	NO2	SI04
0	24.40	31.53	20.93	686	0	MGC/M3	ML/L SAT. ML/L			* MICROGRM-AT/L *
2.5	24.32	31.54	20.96	683	.017		3.96 83 .81 3.96 83 .82			
5.0	24.25	31.55	20.98	680	.034		3.95 83 .83			

GULF OF GUAYAQUIL CRUISE 6107 STATION E- 2 LAT. 02 41.6 S LONG. 79 58.8 W DATE 31 OCT 1961
 TIME 0720- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 9KT (4.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 21.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 750 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* O X Y G E N * O/00	P04	NO2	SI04
0	24.19	31.56	21.01	678		MGC/M3	ML/L SAT. 91			* MICROGRM-AT/L *
5.0	24.20	31.47	20.94	685			4.33 80	3.84		.45 .94

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* O X Y G E N * O/00	P04	NO2	SI04
0	24.19	31.56	21.01	678	0	MGC/M3	ML/L SAT. 91			* MICROGRM-AT/L *
2.5	24.20	31.51	20.97	681	.017		4.33 85			.45 .70
5.0	24.20	31.47	20.94	685	.034		4.08 80	3.84		.70 .94

GULF OF GUAYAQUIL CRUISE 6107 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 31 OCT 1961
 TIME 0835- WEATHER 02 CLOUD COVER 6/10 WIND VELOCITY SKT (2.5 M/SEC) WIND DIR. 175-185 T
 SECCHI DISK DEPTH M SEA TEMP. 22.5 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 750 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AUU ML/L	* NO2 MICROGRM-AT/L *
0	24.45	32.30	21.49	632			81	.90	
5.0	24.45	32.29	21.48	632			81	.90	
10.0	24.40	32.36	21.55	626			81	.89	
20.0	24.45	32.00	21.27	653			79	.99	

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AUU ML/L	* NO2 MICROGRM-AT/L *
0	24.45	32.30	21.49	632	0		81	.90	
2.5	24.45	32.29	21.49	632	.016		81	.90	
5.0	24.45	32.29	21.48	632	.032		81	.90	
7.5	24.42	32.32	21.52	629	.047		81	.89	
10.0	24.40	32.36	21.55	626	.063		81	.89	
15.0	24.43	32.18	21.41	640	.095		80	.94	
20.0	24.45	32.00	21.26	653	.127		79	.99	

GULF OF GUAYAQUIL CRUISE 6107 STATION G-2 LAT. 02 45.5 S LONG. 79 51.8 W DATE 31 OCT 1961
 TIME 0925- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 5K1 (2.5 M/SEC) WIND DIR. 175-185 T
 SECCHI DISK DEPTH M SEA TEMP. 21.8 C AIR TEMP.(WEI) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 750 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AOU ML/L	NO2 * MICROGRM-AT/L	SI04 *
0	24.65	31.70	20.98	681		3.88	82	.86		
5.0	24.60	31.63	20.94	684		3.84	81	.91		
10.0	24.65	31.80	21.06	674		3.87	82	.87		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AOU ML/L	NO2 * MICROGRM-AT/L	SI04 *
0	24.65	31.70	20.98	681	0	3.88	82	.86		
2.5	24.63	31.66	20.96	683	.017	3.86	81	.88		
5.0	24.60	31.63	20.94	684	.034	3.84	81	.91		
7.5	24.63	31.71	21.00	679	.051	3.86	81	.89		
10.0	24.65	31.80	21.05	674	.068	3.87	82	.87		

GULF OF GUAYAQUIL CRUISE 6107 STATION H- 2 LAT. 02 46.4 S LONG. 79 50.0 W DATE 31 OCT 1961
 TIME 1005- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 175-185 T
 SECCHI DISK DEPTH M SEA TEMP. 21.9 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 750 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00	AOU ML/L	PO4	NO2	SIO4
0	24.60	30.53	20.11	764			ML/L SAT. 80	.94			
5.0	24.70	30.64	20.17	759			3.84 73	1.31			
							3.46				

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00	AOU ML/L	PO4	NO2	SIO4
0	24.60	30.53	20.11	764	0		ML/L SAT. 80	.94			
2.5	24.65	30.58	20.14	761	.019		3.84 76	1.13			
5.0	24.70	30.64	20.17	759	.038		3.65 73	1.31			
							3.46				

GULF OF GUAYAQUIL CRUISE 6107 STATION I-1 LAT. 02 53.2 S LONG. 79 55.2 W DATE 31 OCT 1961
 TIME 1245- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 23.1 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* O X Y G E N O/00	* AOU	PO4	NO2	SI04
0	25.00	32.66	21.60	621		MGC/M3	ML/L SAT.	ML/L			
5.0	24.45	32.66	21.76	606			4.40 94	.29			
							3.83 81	.90			

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* O X Y G E N O/00	* AOU	PO4	NO2	SI04
0	25.00	32.66	21.60	621	0	MGC/M3	ML/L SAT.	ML/L			
2.5	24.73	32.66	21.68	614	.015		4.40 94	.29			
5.0	24.45	32.66	21.76	606	.031		4.11 87	.59			
							3.83 81	.90			

GULF OF GUAYAQUIL CRUISE 6107 STATION J-1 LAT. 03 03.3 S LONG. 79 54.8 W DATE 31 OCT 1961
 TIME 1520- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 9KT (4.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 22.9 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

OBSERVED		AND COMPUTED		VALUES AT OBSERVED		DEPTH S		
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OXYGEN O/00 AOU ML/L SAT. 90 89	* PO4 NO2 SIO4 * MICROGRM-AT/L *
0	24.99	32.65	21.59	622			4.21	.48
5.0	24.55	32.57	21.67	615			4.21	.51

INTERPOLATED		AND COMPUTED		VALUES AT STANDARD		DEPTH S		
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OXYGEN O/00 AOU ML/L SAT. 90 89	* PO4 NO2 SIO4 * MICROGRM-AT/L *
0	24.99	32.65	21.59	622	0		4.21	.48
2.5	24.77	32.61	21.63	618	.016		4.21	.50
5.0	24.55	32.57	21.67	615	.031		4.21	.51

GULF OF GUAYAQUIL CRUISE 6107 STATION K-1 LAT. 03 02.1 S LONG. 79 57.2 W DATE 31 OCT 1961
 TIME 1545- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 12KT (6.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 23.0 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT. ML/L	* P O 4	N O 2	S I O 4
0	24.80	32.99	21.91	592			4.33 92			
5.0	24.40	32.94	21.99	584			4.19 89			
10.0	24.35	33.01	22.06	578			4.14 88			

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT. ML/L	* P O 4	N O 2	S I O 4
0	24.80	32.99	21.91	592	0		4.33 92			
2.5	24.60	32.96	21.95	588	.015		4.26 91			
5.0	24.40	32.94	21.99	584	.029		4.19 89			
7.5	24.37	32.98	22.03	580	.044		4.16 88			
10.0	24.35	33.01	22.06	578	.058		4.14 88			

GULF OF GUAYAQUIL CRUISE 6107 STATION L-1 LAT. 03 00.2 S LONG. 80 00.5 W DATE 31 OCT 1961
 TIME 1615- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 12KT (6.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 22.9 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00	SAT. ML/L	* MICROGRM-AT/L *	PO4	NO2	SIO4
0	24.99	32.79	21.70	612				92	.35			
5.0	24.20	32.97	22.07	576				89	.53			
10.0	24.20	32.99	22.09	575				81	.90			
20.0	24.20	32.99	22.09	575				82	.85			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00	SAT. ML/L	* MICROGRM-AT/L *	PO4	NO2	SIO4
0	24.99	32.79	21.70	612	0			92	.35			
2.5	24.60	32.88	21.88	594	.015			91	.44			
5.0	24.20	32.97	22.07	576	.030			89	.53			
7.5	24.20	32.98	22.08	575	.044			85	.71			
10.0	24.20	32.99	22.09	575	.059			81	.90			
15.0	24.20	32.99	22.09	575	.087			82	.87			
20.0	24.20	32.99	22.09	575	.116			82	.85			

GULF OF GUAYAQUIL CRUISE 6107 STATION M-1 LAT. 02 58.3 S LONG. 80 03.5 W DATE 31 OCT 1961
 TIME 1640- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 22.4 C AIR TEMP. (WET) C AIR TEMP. (DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AUU ML/L	NO2 MICROGRM-AT/L *
0	24.60	32.92	21.91	591			4.16 88	.55	
5.0	23.95	32.92	22.11	573			3.44 72	1.32	
10.0	23.85	33.15	22.31	553			3.89 82	.87	

INTERPOLATED		AND COMPUTED		VALUES		AT STANDARD		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AUU ML/L	NO2 MICROGRM-AT/L *
0	24.60	32.92	21.91	591	0		4.16 88	.55	
2.5	24.27	32.92	22.01	582	.015		3.80 80	.93	
5.0	23.95	32.92	22.11	573	.029		3.44 72	1.32	
7.5	23.89	33.05	22.22	562	.043		3.67 77	1.09	
10.0	23.85	33.15	22.31	553	.057		3.89 82	.87	

GULF OF GUAYAQUIL CRUISE 6107 STATION N-1 LAT. 03 02.9 S LONG. 80 07.0 W DATE 31 OCT 1961
 TIME 1800- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 21.3 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	23.40	33.03	22.35	550			ML/L SAT. ML/L			* MICROGRM-AT/L *
5.0	23.30	33.17	22.48	537			3.90 81 .90			
10.0	23.40	33.01	22.33	551			3.91 81 .89			
							3.75 78 1.05			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	23.40	33.03	22.35	550	0		ML/L SAT. ML/L			* MICROGRM-AT/L *
2.5	23.35	33.10	22.42	543	.014		3.90 81 .90			
5.0	23.30	33.17	22.48	537	.027		3.91 81 .89			
7.5	23.35	33.09	22.41	544	.041		3.83 80 .97			
10.0	23.40	33.01	22.33	551	.054		3.75 78 1.05			

GULF OF GUAYAQUIL CRUISE 6107 STATION 0-1 LAT. 03 05.8 S LONG. 80 05.5 W DATE 31 OCT 1961
 TIME 1840- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 20.7 C AIR TEMP. (WET) C AIR TEMP. (DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTH S	
DEPTH	TEMP.	SIG-T	THERMO	TOTAL	* O X Y G E N	* PO4	NO3	SIG4	
METERS	DEG C	G/L	ANOMALY	CO2	0/00	ML/L	ML/L	ML/L	
			CL/T	MGC/M3	SAT.	ML/L	* MICROGRM-AT/L		
0	23.35	22.64	522		88	.56			
5.0	22.35	33.40			4.23				
10.0	23.23	33.31			4.24				
					4.39				

INTERRUPATED		AND COMPUTED		VALUES		AT STANDARD		DEPTH S	
DEPTH	TEMP.	SIG-T	THERMO	TOTAL	* O X Y G E N	* PO4	NO3	SIG4	
METERS	DEG C	G/L	ANOMALY	CO2	0/00	ML/L	ML/L	ML/L	
			CL/T	MGC/M3	SAT.	ML/L	* MICROGRM-AT/L		
0	-0	-0.09	2745	0	88	.56			

GULF OF GUAYAQUIL CRUISE 6107 STATION P-1 LAT. 03 08.6 S LONG. 80 04.0 W DATE 31 OCT 1961
 TIME 1915- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 20.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* O X Y G E N * O/00 ACU	PO4	NO2	SIU4
0	23.55					MGC/M3	ML/L SAT. ML/L	* MICROGRM-AT/L	#	
5.0	23.55						4.38			
10.0	23.55						4.46			
							4.40			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* O X Y G E N * O/00 ACU	PO4	NO2	SIU4
0						MGC/M3	ML/L SAT. ML/L	* MICROGRM-AT/L	#	
2.5							4.38			
5.0							4.42			
7.5							4.46			
10.0							4.43			
							4.40			

GULF OF GUAYAQUIL CRUISE 6107 STATION Q-1 LAT. 03 11.9 S LONG. 80 16.3 W DATE 31 OCT 1961
 TIME 1950- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 21.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTH S	
DEPTH	TEMP.	SAL.	SIG-T	THERMO	TOTAL	* O X Y	G E N	* P04	NO2
METERS	DEG C	0/00	G/L	ANOMALY	CO2	ML/L	SAT.	ML/L	* MICROGRM-AT/L
0	24.45			CL/T	MGC/M3	4.14			
5.0	24.45					4.09			
10.0	24.45					4.26			

INTERPOLATED		AND COMPUTED		VALUES		AT STANDARD		DEPTH S	
DEPTH	TEMP.	SAL.	SIG-T	THERMO	TOTAL	* O X Y	G E N	* P04	NO2
METERS	DEG C	0/00	G/L	ANOMALY	CO2	ML/L	SAT.	ML/L	* MICROGRM-AT/L
0				CL/T <td>MGC/M3</td> <td>4.14</td> <td></td> <td></td> <td></td>	MGC/M3	4.14			
2.5						4.11			
5.0						4.09			
7.5						4.18			
10.0						4.26			

GULF OF GUAYAQUIL CRUISE 6107 STATION R-1 LAT. 03 15.5 S LONG. 80 16.3 W DATE 31 NOV 1961
 TIME 0845- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 21.4 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 749 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* O X Y G E N * O/00	PO4	NO2	SI04
0	23.99	33.53	22.55	530		MGC/M3	ML/L SAT. 93			* MICROGRM-AT/L *
5.0	23.90	33.64	22.66	519			4.41 .33			
10.0	23.40	33.53	22.73	514			4.41 .33			
20.0	17.20	34.42	25.04	293			4.01 .77			
							1.59 30			3.71

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* O X Y G E N * O/00	PO4	NO2	SI04
0	23.99	33.53	22.55	530	0	MGC/M3	ML/L SAT. 93			* MICROGRM-AT/L *
2.5	23.95	33.53	22.57	529	.013		4.41 .33			
5.0	23.90	33.64	22.66	519	.026		4.41 .33			
7.5	23.68	33.59	22.69	517	.039		4.21 .55			
10.0	23.40	33.53	22.73	514	.052		4.01 .77			
15.0	20.30	33.97	23.92	399	.075		2.80 57			2.24
20.0	17.20	34.42	25.04	293	.092		1.59 30			3.71

GULF OF GUAYAQUIL CRUISE 6107 STATION S-1 LAT. 03 11.9 S LONG. 80 16.3 W DATE 31 NOV 1961
 TIME 0930- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 285-295 T
 SECCHI DISK DEPTH M SEA TEMP. 20.5 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 749 MM

DEPTH METERS		TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3		* O X Y G E N O/00 SAT. ML/L	* P O 4	N O 2	S I O 4
0	23.30	33.49	22.73	514				4.09	85	.70		
5.0	23.35	33.24	22.52	533				4.31	90	.49		
10.0	23.30	33.86	23.01	487				4.14	87	.64		
20.0	19.55	33.46	23.73	418				2.38	47	2.73		
30.0	15.75	35.07	25.88	213				.94	17	4.48		

DEPTH METERS		TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3		* O X Y G E N O/00 SAT. ML/L	* P O 4	N O 2	S I O 4
0	23.30	33.49	22.72	514	0			4.09	85	.70		
2.5	23.33	33.31	22.58	527	.013			4.20	88	.59		
5.0	23.35	33.24	22.52	533	.026			4.31	90	.49		
7.5	23.33	33.45	22.68	517	.039			4.22	88	.56		
10.0	23.30	33.86	23.00	487	.052			4.14	87	.64		
15.0	22.30	33.66	23.14	474	.076			3.26	67	1.68		
20.0	19.55	33.46	23.73	418	.098			2.38	47	2.73		
25.0	17.65	34.26	24.81	314	.117			1.66	32	3.61		
30.0	15.75	35.07	25.88	213	.130			.94	17	4.48		

GULF OF GUAYAQUIL CRUISE 6107 STATION T-1 LAT. 03 08.6 S LONG. 80 16.3 W DATE 31 NOV 1961
 TIME 1015- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 285-295 T
 SECCHI DISK DEPTH M SEA TEMP. 20.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 749 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	* P O 4 ML/L	* MICROGRM-AT/L *	SIO4
0	23.10	35.87	24.58	336			4.70 99	.03		
5.0	23.20	33.86	23.03	484			4.33 90	.46		
10.0	18.55	33.68	24.15	378			1.86 36	3.33		
20.0	23.00	33.77	23.02	485			4.31 90	.50		
30.0	21.15	34.54	24.12	380			2.10 43	2.83		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	* P O 4 ML/L	* MICROGRM-AT/L *	SIO4
0	23.10	35.87	24.58	336	0		4.70 99	.03		
2.5	23.17	34.46	23.50	440	.010		4.51 95	.24		
5.0	23.20	33.86	23.03	484	.021		4.33 90	.46		
7.5	20.88	33.85	23.67	423	.033		3.09 63	1.90		
10.0	18.55	33.68	24.15	378	.043		1.86 36	3.33		
15.0	21.13	33.70	23.49	440	.063		3.09 63	1.92		
20.0	23.00	33.77	23.02	485	.086		4.31 90	.50		
25.0	21.99	34.19	23.63	428	.109		3.21 66	1.66		
30.0	21.15	34.54	24.12	380	.129		2.10 43	2.83		

GULF OF GUAYAQUIL CRUISE 6107 STATION U-1 LAT. 03 05.3 S LONG. 80 16.3 W DATE 31 NOV 1961
 TIME 1120- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 285-295 T
 SECCHI DISK DEPTH M SEA TEMP. 21.0 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 749 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	* O X Y G E N * O/00 SAT. ML/L	PO4	NO2	SIO4
0	23.45	33.71	22.85	502			4.16	87			
5.0	23.15	33.66	22.90	497			4.09	85			
10.0	22.80	33.71	23.04	484			3.96	82			
20.0	16.80	33.68	24.57	338			1.19	22			4.18

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	* O X Y G E N * O/00 SAT. ML/L	PO4	NO2	SIO4
0	23.45	33.71	22.85	502	0		4.16	87			
2.5	23.31	33.67	22.86	501	.013		4.13	86			
5.0	23.15	33.66	22.90	497	.025		4.09	85			
7.5	22.99	33.69	22.96	491	.037		4.03	84			
10.0	22.80	33.71	23.03	484	.050		3.96	82			
15.0	19.80	33.69	23.84	407	.072		2.58	52			2.52
20.0	16.80	33.68	24.57	338	.091		1.19	22			4.18

GULF OF GUAYAQUIL CRUISE 6107 STATION L- 2 LAT. 03 00.2 S LONG. 80 00.5 W DATE 31 NOV 1961
 TIME 1420- WEATHER 01 CLOUD COVER 5/10 WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 22.0 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

OBSERVED		AND COMPUTED		VALUES AT OBSERVED		DEPTH S		
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4 * MICROGRM-AT/L *
0	23.89	33.06	22.23	561		4.02	84	.74
5.0	23.75	33.12	22.32	553		3.82	80	.95
10.0	23.55	33.01	22.29	555		3.78	79	1.01

INTERPOLATED		AND COMPUTED		VALUES AT STAN DARD		DEPTH S		
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4 * MICROGRM-AT/L *
0	23.89	33.06	22.23	561	0	4.02	84	.74
2.5	23.82	33.09	22.27	557	.014	3.92	82	.84
5.0	23.75	33.12	22.31	553	.028	3.82	80	.95
7.5	23.65	33.06	22.30	554	.042	3.80	80	.98
10.0	23.55	33.01	22.29	555	.056	3.78	79	1.01

GULF OF GUAYAQUIL CRUISE 6107 STATION I-2 LAT. 02 53.2 S LONG. 79 55.2 W DATE 31 NOV 1961
 TIME 1535- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 22.1 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

OB S E R V E D A N D C O M P U T E D V A L U E S A T Q B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N ML/L	* O X Y G E N O/00	* ACU	PO4	NO2	SI04
0	24.80	31.89	21.08	671			4.16	88	.56			
5.0	24.60	32.03	21.24	656			3.85	81	.89			
10.0	24.75	32.07	21.23	657			3.52	75	1.20			

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N ML/L	* O X Y G E N O/00	* ACU	PO4	NO2	SI04
0	24.80	31.89	21.08	671	0		4.16	88	.56			
2.5	24.70	31.96	21.16	663	.017		4.01	85	.73			
5.0	24.60	32.03	21.24	656	.033		3.85	81	.89			
7.5	24.69	32.05	21.23	656	.050		3.68	78	1.04			
10.0	24.75	32.07	21.23	657	.066		3.52	75	1.20			

GULF OF GUAYAQUIL CRUISE 6107 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 31 NOV 1961
 TIME 1905- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 315-325 T
 SECCHI DISK DEPTH M SEA TEMP. 22.4 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* DOX Y GEN * O/00 SAT. ML/L	PO4 AUU ML/L	NO2 MICROGRM-AT/L *
0	24.80	31.00	20.41	736			3.96 83 .79		
5.0	24.70	31.17	20.57	720			3.95 83 .80		
10.0	24.70	31.04	20.47	730			3.85 81 .91		
20.0	19.65	31.17	21.96	587			3.74 72 1.44		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* DOX Y GEN * O/00 SAT. ML/L	PO4 AUU ML/L	NO2 MICROGRM-AT/L *
0	24.80	31.00	20.41	736	0		3.96 83 .79		
2.5	24.75	31.00	20.42	734	.018		3.96 83 .80		
5.0	24.70	31.17	20.57	720	.037		3.95 83 .80		
7.5	24.70	31.09	20.51	726	.055		3.90 82 .86		
10.0	24.70	31.04	20.47	730	.073		3.85 81 .91		
15.0	22.18	31.10	21.24	656	.108		3.79 77 1.17		
20.0	19.65	31.17	21.96	587	.139		3.74 72 1.44		

GULF OF GUAYAQUIL CRUISE 6108 STATION A-1 LAT. 02 44.2 S LONG. 80 11.5 W DATE 9 NOV 1961
 TIME 0815- WEATHER 01 CLOUD COVER 4/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 45- 55 T
 SECCHI DISK DEPTH M SE TEMP. 24.8 C AIR TEMP.(WET) 20.8 C AIR TEMP.(DRY) 23.3 C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AOU	PO4	NO2	SI04
0	25.14	32.10	21.13	666			76	1.13		
5.0	25.02	32.48	21.46	635			81	.87		
10.0	25.02	32.32	21.34	647			79	.97		
20.0	25.14	32.48	21.42	639			80	.92		
30.0	25.08	32.61	21.54	627			69	1.44		
50.0	25.03	32.48	21.45	635			81	.89		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AOU	PO4	NO2	SI04
0	25.14	32.10	21.13	666	0		76	1.13		
2.5	25.06	32.28	21.30	651	.016		79	1.00		
5.0	25.02	32.48	21.46	635	.033		81	.87		
7.5	25.02	32.39	21.39	642	.049		80	.92		
10.0	25.02	32.32	21.34	647	.065		79	.97		
15.0	25.09	32.41	21.38	642	.097		80	.95		
20.0	25.14	32.48	21.42	639	.129		80	.92		
25.0	25.11	32.55	21.48	632	.161		75	1.18		
30.0	25.08	32.61	21.54	627	.192		69	1.44		
50.0	25.03	32.48	21.45	635	.319		81	.89		

GULF OF GUAYAQUIL CRUISE 6108 STATION B-1 LAT. 02 42.4 S LONG. 80 11.5 W DATE 29 NOV 1961
 TIME 0850- WEATHER 01 CLOUD COVER 4/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) 20.0 C AIR TEMP.(DRY) 22.8 C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN # O/00	ML/L SAT.	ML/L	* MICROGRM-AT/L #	P04	NO2	SI04
0	25.08	32.22	21.24	656				78	1.04				
5.0	25.06	32.59	21.53	628				68	1.48				
10.0	25.11	32.45	21.41	640				75	1.16				

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN # O/00	ML/L SAT.	ML/L	* MICROGRM-AT/L #	P04	NO2	SI04
0	25.08	32.22	21.24	656	0			78	1.04				
2.5	25.07	32.40	21.38	642	.016			73	1.26				
5.0	25.06	32.59	21.53	628	.032			68	1.48				
7.5	25.08	32.52	21.47	634	.048			72	1.32				
10.0	25.11	32.45	21.41	640	.064			75	1.16				

GULF OF GUAYAQUIL CRUISE 6108 STATION C-1 LAT. 02 40.8 S LONG. 80 07.4 W DATE 29 NOV 1961
 TIME 0948- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 325-335 T
 SECCHI DISK DEPTH M SEA TEMP. 25.3 C AIR TEMP.(WET) 21.0 C AIR TEMP.(DRY) 23.1 C
 RELATIVE HUMIDITY 0/0 BAROMETER 745 MM

OTHERSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN * O/00	ML/L SAT. ML/L	PO4	NU2	SI04
0	25.60	32.59	21.36	644				83			
5.0	25.21	32.56	21.46	635				82			
10.0	25.19	32.47	21.40	641				82			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN * O/00	ML/L SAT. ML/L	PO4	NU2	SI04
0	25.60	32.59	21.36	644	0			83			
2.5	25.40	32.57	21.41	639	.016			82			
5.0	25.21	32.56	21.46	635	.032			82			
7.5	25.20	32.51	21.42	638	.048			82			
10.0	25.19	32.47	21.40	641	.064			82			

GULF OF GUAYAQUIL CRUISE 6108 STATION D-1 LAT. 02 40.0 S LONG. 80 02.3 W DATE 29 NOV 1961
 TIME 1045- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH M SEA TEMP. 25.4 C AIR TEMP.(WET) 20.7 C AIR TEMP.(DRY) 23.9 C
 RELATIVE HUMIDITY 0/0 BAROMETER 745 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OXYGEN O/00	* P04	NO2	SIO4
0	25.82	32.43	21.18	662			ML/L SAT. 91			* MICROGRM-AT/L *
5.0	25.48	32.39	21.25	655			ML/L 4.21 74			.42 1.23

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OXYGEN O/00	* P04	NO2	SIO4
0	25.82	32.43	21.18	662	0		ML/L SAT. 91			* MICROGRM-AT/L *
2.5	25.65	32.41	21.21	658	.017		ML/L 4.21 82			.42 .83
5.0	25.48	32.39	21.25	655	.033		ML/L 4.21 74			1.23

GULF OF GUAYAQUIL CRUISE 6108 STATION E-1 LAT. 02 41.6 S LONG. 79 58.8 W DATE 29 NOV 1961
 TIME 1125- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 115-125 T
 SECCHI DISK DEPTH M SEA TEMP. 25.7 C AIR TEMP.(WET) 23.6 C AIR TEMP.(DRY) 26.2 C
 RELATIVE HUMIDITY 0/0 BAROMETER 745 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* O X Y G E N * O/00	PO4	NO2	SI04
0	26.00	32.50	21.17	662		MGC/M3	ML/L SAT. ML/L			* MICROGRM-AT/L *
5.0	25.32	32.41	21.31	649			3.90 84 .72 3.85 82 .82			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* O X Y G E N * O/00	PO4	NO2	SI04
0	26.00	32.50	21.17	662	0	MGC/M3	ML/L SAT. ML/L			* MICROGRM-AT/L *
2.5	25.66	32.45	21.24	655	.016		3.90 84 .72 3.88 83 .77			
5.0	25.32	32.41	21.31	649	.033		3.85 82 .82			

GULF OF GUAYAQUIL CRUISE 6108 STATION F-1 LAT. 02 44.3 S LONG. 79 54.0 W DATE 29 NOV 1961
 TIME 1240- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 45- 55 T
 SECCHI DISK DEPTH M SEA TEMP. 26.1 C AIR TEMP.(WET) 23.8 C AIR TEMP.(DRY) 27.2 C
 RELATIVE HUMIDITY 0/0 BAROMETER 744 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AUU ML/L	* NO2 MICROGRM-AT/L *
0		32.43					3.77		
5.0		32.77					3.76		
10.0	25.38	32.90	21.66	615			74	1.20	
20.0	25.40	32.72	21.52	629			78	1.01	

INTERPULATED AND COMPUTED VALUES AT STANDARD DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AUU ML/L	* NO2 MICROGRM-AT/L *
0		-2.89	17.67		0		3.77		
2.5		-2.89	17.67		.035		3.77		
5.0		-2.89	17.67		.091		3.76		
7.5		-2.89	17.67		.168		3.60		
10.0	25.38	32.90	21.66	615	.219		74	1.20	
15.0	25.39	32.81	21.59	622	.250		76	1.11	
20.0	25.40	32.72	21.52	629	.281		78	1.01	

GULF OF GUAYAQUIL CRUISE 6108 STATION G-1 LAT. 02 45.5 S LONG. 79 51.8 W DATE 29 NOV 1961
 TIME 1305- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 45- 55 T
 SECCHI DISK DEPTH M SEA TEMP. 26.1 C AIR TEMP.(WET) 23.2 C AIR TEMP.(DRY) 26.4 C
 RELATIVE HUMIDITY 0/0 BAROMETER 743 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AOU ML/L SAT. ML/L	PO4	NO2	SI04
0	25.80	31.82	20.72	705			3.22 69 1.43			
5.0	25.12	31.74	20.87	691			3.40 72 1.31			* MICROGRM-AT/L *

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AOU ML/L SAT. ML/L	PO4	NO2	SI04
0	25.80	31.82	20.72	705	0		3.22 69 1.43			
2.5	25.46	31.78	20.80	698	.018		3.31 71 1.37			
5.0	25.12	31.74	20.87	691	.035		3.40 72 1.31			* MICROGRM-AT/L *

GULF OF GUAYAQUIL CRUISE 6108 STATION H-1 LAT. 02 46.4 S LONG. 79 50.0 W DATE 29 NOV 1961
 TIME 1330- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH M SEA TEMP. 28.1 C AIR TEMP.(WET) 23.3 C AIR TEMP.(DRY) 27.8 C
 RELATIVE HUMIDITY 0/0 BAROMETER 743 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4 AOU	N O 2	S I O 4
0	26.48	30.88	19.81	793			ML/L SAT. 82	ML/L .84		
5.0	25.44	31.58	20.65	712			3.79 70	3.30 1.39		* MICROGRM-AT/L *

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4 AOU	N O 2	S I O 4
0	26.48	30.88	19.81	793	0		ML/L SAT. 82	ML/L .84		
2.5	25.96	31.23	20.23	753	.019		3.79 76	3.54 1.11		
5.0	25.44	31.58	20.65	712	.038		3.30 70	3.30 1.39		* MICROGRM-AT/L *

GULF OF GUAYAQUIL CRUISE 6108 STATION I-1 LAT. 02 53.2 S LONG. 79 55.2 W DATE 29 NOV 1961
 TIME 1430- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 35- 45 T
 SECCHI DISK DEPTH M SEA TEMP. 27.6 C AIR TEMP.(WET) 23.8 C AIR TEMP.(DRY) 26.7 C
 RELATIVE HUMIDITY 0/0 BAROMETER 743 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* P04 ML/L	NO2 MICROGRM-AT/L	S104 #
0	27.08	32.30	20.69	709			84			
5.0		32.79				3.83				
10.0		32.83				3.49				
						3.48				

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* P04 ML/L	NO2 MICROGRM-AT/L	S104 #
0	27.08	32.30	20.69	709			84			
						3.83				

GULF OF GUAYAQUIL CRUISE 6108 STATION J-1 LAT. 03 03.3 S LONG. 79 54.8 W DATE 29 NOV 1961
 TIME 1610- WEATHER 00 CLOUD COVER 1/10 WIND VELOCITY 9KT (4.5 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH M SEA TEMP. 26.2 C AIR TEMP.(WET) 23.4 C AIR TEMP.(DRY) 26.6 C
 RELATIVE HUMIDITY 0/0 BAROMETER 742 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4 NO2	SI04 * MICROGRM-AT/L *
0	26.03	32.38	21.07	672			3.37 73		ML/L 1.25
5.0	26.55	32.43	20.95	684			3.90 85		.68

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4 NO2	SI04 * MICROGRM-AT/L *
0	26.03	32.38	21.07	672	0		3.37 73		ML/L 1.25
2.5	26.29	32.40	21.01	678	.017		3.64 79		.96
5.0	26.55	32.43	20.95	684	.034		3.90 85		.68

GULF OF GUAYAQUIL CRUISE 6108 STATION K-1 LAT. 03 02.1 S LONG. 79 57.2 W DATE 29 NOV 1961
 TIME 1635- WEATHER 00 CLOUD COVER 1/10 WIND VELOCITY 13KT (6.5 M/SEC) WIND DIR. 215-225 T
 SECCHI DISK DEPTH M SEA TEMP. 26.0 C AIR TEMP.(WET) 23.1 C AIR TEMP.(DRY) 25.8 C
 RELATIVE HUMIDITY 0/0 BAROMETER 743 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN * O/00 ACU	PO4	NO2	SI04
0	26.28	32.99	21.45	635			ML/L SAT. ML/L			* MICROGRM-AT/L *
5.0	25.46	32.97	21.69	612			3.67 80 .91 3.40 73 1.24			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN * O/00 ACU	PO4	NO2	SI04
0	26.28	32.99	21.45	635	0		ML/L SAT. ML/L			* MICROGRM-AT/L *
2.5	25.87	32.98	21.57	624	.016		3.67 80 .91 3.53 77 1.08			
5.0	25.46	32.97	21.69	612	.031		3.40 73 1.24			

GULF OF GUAYAQUIL CRUISE 6108 STATION L-1 LAT. 03 00.2 S LONG. 80 00.5 W DATE 29 NOV 1961
 TIME 1712- WEATHER 00 CLOUD COVER 1/10 WIND VELOCITY 14KT (7.0 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH M SEA TEMP. 25.2 C AIR TEMP.(WET) 22.7 C AIR TEMP.(DRY) 25.3 C
 RELATIVE HUMIDITY 0/0 BAROMETER 742 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 ACU	PO4	NO2	SI04
0	25.79	33.03	21.64	618			ML/L SAT. ML/L			* MICROGRM-AT/L *
5.0	25.39	33.37	22.02	582			9.99 216 -5.37			
10.0	25.31	33.33	22.01	582			9.99 216 -5.35			
							9.99 215 -5.35			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 ACU	PO4	NO2	SI04
0	25.79	33.03	21.64	618	0		ML/L SAT. ML/L			* MICROGRM-AT/L *
2.5	25.59	33.20	21.82	600	.015		9.99 216 -5.36			
5.0	25.39	33.37	22.01	582	.030		9.99 216 -5.35			
7.5	25.34	33.35	22.01	582	.045		9.99 215 -5.35			
10.0	25.31	33.33	22.01	582	.059		9.99 215 -5.35			

GULF OF GUAYAQUIL CRUISE 6108 STATION M-1 LAT. 02 58.3 S LONG. 80 03.5 W DATE 29 NOV 1961
 TIME 1745- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 15KT (7.5 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH M SEA TEMP. 25.1 C AIR TEMP.(WET) 23.3 C AIR TEMP.(DRY) 24.9 C
 RELATIVE HUMIDITY 0/0 BAROMETER 743 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OXYGEN O/00	* SAT. ML/L	* AOU ML/L	PO4	NO2	SIO4
0	25.62	32.97	21.64	617				84	.72			
5.0	24.41	32.99	22.02	581				74	1.21			
10.0	24.60	32.97	21.95	588				74	1.21			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OXYGEN O/00	* SAT. ML/L	* AOU ML/L	PO4	NO2	SIO4
0	25.62	32.97	21.64	617	0			84	.72			
2.5	25.01	32.98	21.83	599	.015			79	.97			
5.0	24.41	32.99	22.02	581	.030			74	1.21			
7.5	24.52	32.98	21.98	585	.045			74	1.21			
10.0	24.60	32.97	21.95	588	.059			74	1.21			

GULF OF GUAYAQUIL CRUISE 6108 STATION N-1 LAT. 03 02.9 S LONG. 80 07.0 W DATE 29 NOV 1961
 TIME 1925- WEATHER CLOUD COVER WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 75- 85 T
 SECCHI DISK DEPTH M SEA TEMP. 24.2 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 23.9 C
 RELATIVE HUMIDITY 0/0 BAROMETER 744 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT.	* P O 4 ML/L	* NO2 ML/L	* SIO4 ML/L
0	24.60	33.13	22.07	576			70	1.43		
5.0	23.60	33.17	22.40	545			64	1.71		
10.0	23.71	33.15	22.35	550			58	1.99		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT.	* P O 4 ML/L	* NO2 ML/L	* SIO4 ML/L
0	24.60	33.13	22.07	576	0		70	1.43		
2.5	24.10	33.15	22.23	560	.014		67	1.57		
5.0	23.60	33.17	22.40	545	.028		64	1.71		
7.5	23.66	33.16	22.37	548	.042		61	1.85		
10.0	23.71	33.15	22.35	550	.055		58	1.99		

GULF OF GUAYAQUIL CRUISE 6108 STATION 0-1 LAT. 03 05.8 S LONG. 80 05.5 W DATE 29 NOV 1961
 TIME 2005- WEATHER CLOUD COVER WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 155-165 T
 SECCHI DISK DEPTH M SEA TEMP. 23.2 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 23.9 C
 RELATIVE HUMIDITY 0/0 BAROMETER 744 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T G B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT. ML/L	* P O 4 ML/L	N O 2	S I O 4
0	23.60	33.19	22.41	544			70	1.42		
5.0	23.52	33.39	22.59	527			71	1.41		
10.0	23.54	33.19	22.43	542			78	1.06		

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT. ML/L	* P O 4 ML/L	N O 2	S I O 4
0	23.60	33.19	22.41	544	0		70	1.42		
2.5	23.56	33.29	22.50	535	.013		70	1.41		
5.0	23.52	33.39	22.59	527	.027		71	1.41		
7.5	23.53	33.27	22.50	536	.040		74	1.23		
10.0	23.54	33.19	22.43	542	.054		78	1.06		

GULF OF GUAYAQUIL CRUISE 6108 STATION P-1 LAT. 03 08.6 S LONG. 80 04.0 W DATE 29 NOV 1961
 TIME 2045- WEATHER CLOUD COVER WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 115-125 T
 SECCHI DISK DEPTH M SEA TEMP. 24.1 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 24.4 C
 RELATIVE HUMIDITY 0/0 BAROMETER 745 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T C B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	24.49	33.31	22.24	560			ML/L SAT. 77	ML/L		* MICROGRM-AT/L *
5.0	24.39	33.35	22.30	554			3.62 75	3.53 1.18		

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	24.49	33.31	22.24	560	0		ML/L SAT. 77	ML/L		* MICROGRM-AT/L *
2.5	24.44	33.33	22.27	557	.014		3.62 76	3.58 1.13		
5.0	24.39	33.35	22.30	554	.028		3.53 75	3.53 1.18		

GULF OF GUAYAQUIL CRUISE 6108 STATION Q-1 LAT. 03 11.9 S LONG. 80 16.3 W DATE 29 NOV 1961
 TIME 2145- WEATHER CLOUD COVER WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 85- 95 T
 SECCHI DISK DEPTH M SEA TEMP. 25.2 C AIR TEMP.(WET) 22.5 C AIR TEMP.(DRY) 24.4 C
 RELATIVE HUMIDITY 0/0 BAROMETER 751 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 ACU	PG4	NO2	SI04
0	25.58	33.17	21.81	602			ML/L SAT. ML/L			* MICROGRM-AT/L *
5.0	25.02	33.33	22.10	574			9.99 216 -5.36			
10.0	24.28	33.35	22.33	551			9.99 214 -5.33			
							9.99 212 -5.27			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 ACU	PG4	NO2	SI04
0	25.58	33.17	21.81	602	0		ML/L SAT. ML/L			* MICROGRM-AT/L *
2.5	25.33	33.25	21.94	589	.015		9.99 216 -5.36			
5.0	25.02	33.33	22.10	574	.029		9.99 215 -5.34			
7.5	24.65	33.34	22.21	562	.044		9.99 214 -5.33			
10.0	24.28	33.35	22.33	551	.058		9.99 213 -5.30			
							9.99 212 -5.27			

GULF OF GUAYAQUIL CRUISE 6108 STATION Q-2 LAT. 03 11.9 S LONG. 80 16.3 W DATE 30 NOV 1961
 TIME 0750- WEATHER 03 CLOUD COVER 9/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 165-175 T
 SECCHI DISK DEPTH M SEA TEMP. 24.8 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 23.3 C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4 ML/L	NO2 ML/L	SIO4 ML/L
0	25.28	33.15	21.88	594			80			
5.0	24.75	33.26	22.13	571			77			
10.0	25.09	33.31	22.06	577			78			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4 ML/L	NO2 ML/L	SIO4 ML/L
0	25.28	33.15	21.88	594	0		80			
2.5	25.01	33.20	22.00	583	.015		78			
5.0	24.75	33.26	22.13	571	.029		77			
7.5	24.95	33.29	22.09	575	.043		77			
10.0	25.09	33.31	22.06	577	.058		78			

GULF OF GUAYAQUIL CRUISE 6108 STATION P- 2 LAT. 03 08.6 S LONG. 80 04.0 W DATE 30 NOV 1961
 TIME 0840- WEATHER 03 CLOUD COVER 9/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 125-135 T
 SECCHI DISK DEPTH M SEA TEMP. 24.0 C AIR TEMP.(WET) 21.7 C AIR TEMP.(DRY) 23.9 C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

OBSERVED		AND COMPUTED		VALUES AT OBSERVED		DEPTH S			
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OXYGEN O/00 AOU ML/L SAT. ML/L	* PO4 MICROGRM-AT/L	NO2 SIO4
0	24.18	33.33	22.35	550		3.45	73 1.28		
5.0	24.05	33.30	22.36	548		3.65	77 1.09		
10.0	24.08	33.33	22.38	547		3.65	77 1.09		

INTERPOLATED		AND COMPUTED		VALUES AT STANDARD		DEPTH S			
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OXYGEN O/00 AOU ML/L SAT. ML/L	* PO4 MICROGRM-AT/L	NO2 SIO4
0	24.18	33.33	22.35	550	0	3.45	73 1.28		
2.5	24.11	33.31	22.35	549	.014	3.55	75 1.18		
5.0	24.05	33.30	22.36	548	.027	3.65	77 1.09		
7.5	24.07	33.32	22.37	547	.041	3.65	77 1.09		
10.0	24.08	33.33	22.38	547	.055	3.65	77 1.09		

GULF OF GUAYAQUIL CRUISE 6108 STATION 0- 2 LAT. 03 05.8 S LONG. 80 05.5 W DATE 30 NOV 1961
 TIME 0920- WEATHER 03 CLOUD COVER 9/10 WIND VELOCITY KT (M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 23.6 C AIR TEMP.(WET) 21.4 C AIR TEMP.(DRY) 23.8 C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

O B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S										
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* SAT. ML/L	NO2 ML/L	SI04 ML/L
0	23.78	33.28	22.43	542			74	1.25		
5.0	23.62	33.33	22.51	534			70	1.45		
10.0	23.62	33.33	22.51	534			73	1.27		

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S										
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* SAT. ML/L	NO2 ML/L	SI04 ML/L
0	23.78	33.28	22.43	542	0		74	1.25		
2.5	23.70	33.30	22.47	538	.014		72	1.35		
5.0	23.62	33.33	22.51	534	.027		70	1.45		
7.5	23.62	33.33	22.51	534	.040		71	1.36		
10.0	23.62	33.33	22.51	534	.054		73	1.27		

GULF OF GUAYAQUIL CRUISE 6108 STATION N-2 LAT. 03 02.9 S LONG. 80 07.0 W DATE 30 NOV 1961
 TIME 0956-- WEATHER 03 CLOUD COVER 9/10 WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 195-205 T
 SECCHI DISK DEPTH M SEA TEMP. 24.0 C AIR TEMP.(WET) 21.2 C AIR TEMP.(DRY) 23.4 C
 RELATIVE HUMIDITY 0/0 BAROMETER 747 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OXYGEN O/00	* ML/L	* SAT.	* ML/L	* AQU	P04	NO2	SI04
0	24.15	33.31	22.34	550				3.43	73	1.30				
5.0	23.96	33.12	22.25	559				3.36	71	1.39				
10.0	23.70	33.26	22.44	541				3.04	64	1.73				

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OXYGEN O/00	* ML/L	* SAT.	* ML/L	* AQU	P04	NO2	SI04
0	24.15	33.31	22.34	550	0			3.43	73	1.30				
2.5	24.06	33.19	22.28	556	.014			3.39	72	1.35				
5.0	23.96	33.12	22.25	559	.028			3.36	71	1.39				
7.5	23.83	33.19	22.34	550	.042			3.20	67	1.56				
10.0	23.70	33.26	22.43	541	.055			3.04	64	1.73				

GULF OF GUAYAQUIL CRUISE 6108 STATION U-1 LAT. 03 05.3 S LONG. 80 16.3 W DATE 30 NOV 1961
 TIME 1210- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 9KT (4.5 M/SEC) WIND DIR. 105-115 T
 SECCHI DISK DEPTH M SEA TEMP. 24.8 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 23.8 C
 RELATIVE HUMIDITY 0/0 BAROMETER 746 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT. ML/L	* P O 4 NO2 MICROGRM-AT/L *	SIO4
0	24.36	33.15	22.16	568			71 1.39		
5.0	24.09	33.12	22.22	562			60 1.91		
10.0	17.78	34.33	24.83	313			23 4.04		
20.0	14.90	34.58	25.69	231			7 5.17		

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT. ML/L	* P O 4 NO2 MICROGRM-AT/L *	SIO4
0	24.36	33.15	22.16	568	0		71 1.39		
2.5	24.23	33.13	22.19	565	.014		65 1.65		
5.0	24.09	33.12	22.22	562	.028		60 1.91		
7.5	20.94	33.72	23.56	434	.041		41 2.97		
10.0	17.78	34.33	24.83	313	.050		23 4.04		
15.0	16.11	34.46	25.33	265	.065		15 4.61		
20.0	14.90	34.58	25.69	231	.077		7 5.17		

GULF OF GUAYAQUIL CRUISE 6108 STATION T-1 LAT. 03 08.6 S LONG. 80 16.3 W DATE 30 NOV 1961
 TIME 1256- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 25- 35 T
 SECCHI DISK DEPTH M SEA TEMP. 24.6 C AIR TEMP.(WET) 22.3 C AIR TEMP.(DRY) 23.4 C
 RELATIVE HUMIDITY 0/0 BAROMETER 745 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S										
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* O X Y G E N * O/00	PO4	NO2	SI04
0	24.68	33.49	22.32	552		MGC/M3	ML/L SAT.	ML/L		* MICROGRM-AT/L *
5.0	23.98	33.28	22.37	548			69	1.47		
10.0	21.20	33.71	23.48	442			70	1.42		
20.0	15.29	33.70	24.93	304			58	2.07		
40.0	14.88	34.76	25.83	218			11	4.94		
							12	4.87		

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S										
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* O X Y G E N * O/00	PO4	NO2	SI04
0	24.68	33.49	22.32	552	0	MGC/M3	ML/L SAT.	ML/L		* MICROGRM-AT/L *
2.5	24.38	33.39	22.33	551	.014		69	1.47		
5.0	23.98	33.28	22.37	548	.028		69	1.45		
7.5	22.99	33.50	22.82	505	.041		70	1.42		
10.0	21.20	33.71	23.48	442	.053		64	1.75		
15.0	18.24	33.70	24.24	369	.073		58	2.07		
20.0	15.29	33.70	24.93	304	.090		34	3.50		
25.0	15.16	34.04	25.21	276	.104		11	4.94		
30.0	15.05	34.32	25.45	254	.118		11	4.92		
							11	4.90		

GULF OF GUAYAQUIL CRUISE 6108 STATION S- 0 LAT. 03 11.9 S LONG. 80 16.3 W DATE 30 NOV 1961
 TIME 1356- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 35- 45 T
 SECCHI DISK DEPTH M SEA TEMP. 24.1 C AIR TEMP.(WET) 21.1 C AIR TEMP.(DRY) 22.3 C
 RELATIVE HUMIDITY 0/0 BAROMETER 751 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* AOU ML/L	P04	NO2	SI04
0	23.96	33.35	22.43	542			3.85 81	.89			
5.0	23.55	33.30	22.51	534			3.97 83	.81			
10.0	22.62	33.49	22.92	495			3.29 68	1.56			
20.0	16.98	34.67	25.28	270			1.09 21	4.22			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* AOU ML/L	P04	NO2	SI04
0	23.96	33.35	22.43	542	0		3.85 81	.89			
2.5	23.77	33.32	22.46	539	.014		3.91 82	.85			
5.0	23.55	33.30	22.51	534	.027		3.97 83	.81			
7.5	23.15	33.40	22.70	516	.040		3.63 75	1.18			
10.0	22.62	33.49	22.92	495	.053		3.29 68	1.56			
15.0	19.80	34.08	24.13	379	.075		2.19 44	2.89			
20.0	16.98	34.67	25.28	270	.091		1.09 21	4.22			

GULF OF GUAYAQUIL CRUISE 6108 STATION R-1 LAT. 03 15.5 S LONG. 80 16.3 W DATE 30 NOV 1961
 TIME 1450- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 35- 45 T
 SECCHI DISK DEPTH M SEA TEMP. 24.1 C AIR TEMP.(WET) 21.7 C AIR TEMP.(DRY) 23.6 C
 RELATIVE HUMIDITY 0/0 BAROMETER 745 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T G R S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* AOU ML/L	PO4	NO2	SIU4
0	24.19	33.68	22.61	525			88	.57			
5.0	23.81	33.84	22.84	503			74	1.23			
10.0	23.70	33.64	22.72	514			78	1.04			
20.0	22.60	33.75	23.12	476			72	1.37			

* MICROGRM-AT/L #

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* AOU ML/L	PO4	NO2	SIU4
0	24.19	33.68	22.61	525	0		88	.57			
2.5	24.02	33.76	22.72	514	.013		81	.90			
5.0	23.81	33.84	22.84	503	.026		74	1.23			
7.5	23.76	33.73	22.77	509	.038		76	1.13			
10.0	23.70	33.64	22.72	514	.051		78	1.04			
15.0	23.15	33.69	22.92	495	.076		75	1.20			
20.0	22.60	33.75	23.12	476	.101		72	1.37			

* MICROGRM-AT/L #

GULF OF GUAYAQUIL CRUISE 6108 STATION S-2 LAT. 03 11.9 S LONG. 80 16.3 W DATE 1 DEC 1961
 TIME 0750- WEATHER 02 CLOUD COVER 6/10 WIND VELOCITY SKT (2.5 M/SEC) WIND DIR. 125-135 T
 SECCHI DISK DEPTH M SEA TEMP. 24.6 C AIR TEMP.(WET) 22.7 C AIR TEMP.(DRY) 23.8 C
 RELATIVE HUMIDITY 0/0 BAROMETER 744 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O R S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	24.58	33.51	22.37	548			ML/L SAT. 85	ML/L	* MICROGRM-AT/L	*
5.0	24.49	33.53	22.41	544			3.99	.70		
10.0	17.50	34.56	25.08	289			4.09	.61		
20.0	15.21	34.97	25.92	209			1.31	3.96		
30.0	15.10	34.94	25.92	209			.72	4.77		
							.62	11	4.88	

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	24.58	33.51	22.37	548	0		ML/L SAT. 85	ML/L	* MICROGRM-AT/L	*
2.5	24.54	33.52	22.39	546	.014		3.99	.70		
5.0	24.49	33.53	22.41	544	.027		4.04	.65		
7.5	21.00	34.04	23.79	412	.039		4.09	.61		
10.0	17.50	34.56	25.08	289	.048		2.70	2.28		
15.0	16.17	34.79	25.56	243	.061		1.31	25	3.96	
20.0	15.21	34.97	25.92	209	.073		1.02	19	4.36	
25.0	15.15	34.95	25.92	209	.083		.72	13	4.77	
30.0	15.10	34.94	25.92	209	.094		.67	12	4.82	
							.62	11	4.88	

GULF OF GUAYAQUIL CRUISE 6108 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 1 DEC 1961
 TIME 1250- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 205-215 T
 SECCHI DISK DEPTH M SEA TEMP. 26.2 C AIR TEMP.(WET) 23.4 C AIR TEMP.(DRY) 25.6 C
 RELATIVE HUMIDITY 0/0 BAROMETER 751 MM

U R S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* SAT.	ML/L	* ML/L	P04	N02	SI04
0	26.25	32.52	21.11	668				89	.51				
5.0	26.05	32.57	21.21	659				89	.51				
10.0	25.81	34.33	22.61	525				86	.64				
20.0	25.76	34.33	22.62	523				87	.58				

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* SAT.	ML/L	* ML/L	P04	N02	SI04
0	26.25	32.52	21.11	668	0			89	.51				
2.5	26.15	32.54	21.16	664	.017			89	.51				
5.0	26.05	32.57	21.21	659	.033			89	.51				
7.5	25.93	33.45	21.91	592	.049			88	.57				
10.0	25.81	34.33	22.61	525	.063			86	.64				
15.0	25.78	34.33	22.62	524	.089			87	.61				
20.0	25.76	34.33	22.62	523	.115			87	.58				

GULF OF GUAYAQUIL CRUISE 6109 STATION F-1 LAT. 02 44.3 S LONG. 79 54.0 W DATE 11 DEC 1961
 TIME 1440- WEATHER 01 CLOUD COVER 1/10 WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH M SEA TEMP. 26.9 C AIR TEMP.(WET) 24.5 C AIR TEMP.(DRY) 26.8 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 751 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS								
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 NO2 MICROGRM-AT/L *
0	26.68	32.54	20.99	680			3.48 76 1.09	
5.0	26.50	32.52	21.03	676			3.50 76 1.08	
10.0	26.39	32.70	21.20	659			3.49 76 1.09	
15.0	26.39	32.54	21.08	671			3.40 74 1.19	

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS								
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 NO2 MICROGRM-AT/L *
0	26.68	32.54	20.99	680	0		3.48 76 1.09	
2.5	26.59	32.53	21.01	678	.017		3.49 76 1.08	
5.0	26.50	32.52	21.03	676	.034		3.50 76 1.08	
7.5	26.44	32.62	21.13	666	.051		3.49 76 1.09	
10.0	26.39	32.70	21.20	659	.067		3.49 76 1.09	
15.0	26.39	32.54	21.08	671	.101		3.40 74 1.19	

GULF OF GUAYAQUIL CRUISE 6109 STATION 19-1 LAT. 03 08.0 S LONG. 81 17.0 W DATE 12 DEC 1961
 TIME 1450- WEATHER 02 CLOUD COVER 6/10 WIND VELOCITY 17KT (8.5 M/SEC) WIND DIR. 95-105 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 22.2 C AIR TEMP.(WET) 21.4 C AIR TEMP.(DRY) 22.3 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER 739 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS											
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX ML/L	YGEN O/00	* ML/L	NO2 ML/L	SI04 ML/L
0	22.69	33.49	22.90	497			4.19	87	.65		
5.0	22.56	33.49	22.94	493			4.30	89	.55		
10.0	22.05	33.62	23.18	470			4.24	87	.65		
15.0	20.79	33.98	23.80	411			4.19	84	.79		
20.0	18.29	34.40	24.76	319			3.26	63	1.93		
30.0	17.32	34.51	25.08	289			3.08	58	2.20		
50.0	14.42	34.72	25.90	211			1.39	25	4.19		
70.0	13.71	34.72	26.05	197			.88	16	4.78		

I N T E R P O L A T E D			A N D C O M P U T E D			V A L U E S A T S T A N D A R D			D E P T H S			
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * ML/L	O/00 SAT.	ML/L ACU	P04 * MICROGRM-AT/L *	N02	SI04
0	22.69	33.49	22.90	497	0		4.19	87	.65			
2.5	22.63	33.49	22.92	495	.012		4.24	88	.60			
5.0	22.56	33.49	22.94	493	.025		4.30	89	.55			
7.5	22.33	33.56	23.05	483	.037		4.27	88	.60			
10.0	22.05	33.62	23.18	470	.049		4.24	87	.65			
15.0	20.79	33.98	23.80	411	.071		4.19	84	.79			
20.0	18.29	34.40	24.76	319	.089		3.26	63	1.93			
25.0	17.76	34.46	24.94	303	.105		3.17	61	2.07			
30.0	17.32	34.51	25.08	289	.120		3.08	58	2.20			
50.0	14.42	34.72	25.90	211	.170		1.39	25	4.19			

GULF OF GUAYAQUIL CRUISE 6109 STATION 18-1 LAT. 03 09.0 S LONG. 80 21.0 W DATE 12 DEC 1961
 TIME 1650- WEATHER 02 CLOUD COVER 7-8/10 WIND VELOCITY 12KT (6.0 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH 1.4 M SEA TEMP. 21.7 C AIR TEMP. (WET) C AIR TEMP. (DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 740 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * ML/L SAT. O/00 AOU ML/L	PO4 * MICROGRM-AT/L *	NO2 SIU4
0	22.40	33.66	23.11	477			4.36 90 .50		
5.0	22.08	33.68	23.22	467			4.07 83 .81		
10.0	20.81	34.02	23.82	409			4.26 86 .72		
15.0	19.89	34.31	24.28	365			4.40 87 .65		
20.0	19.49	34.20	24.30	363			4.24 83 .85		
30.0	17.25	34.56	25.14	284			3.56 67 1.73		
50.0	14.26	34.76	25.97	205			1.73 31 3.87		
75.0	13.99	34.78	26.04	198			1.36 24 4.27		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O ML/L	X Y O/00	E N ML/L	* AQU	PO4 #	NO2 MICROGRAM-AT/L	SIO4 #
0	22.40	33.66	23.11	477	0		4.36	90	.50				
2.5	22.25	33.67	23.16	472	.012		4.21	87	.66				
5.0	22.08	33.68	23.22	467	.024		4.07	83	.81				
7.5	21.45	33.85	23.52	438	.035		4.17	84	.77				
10.0	20.81	34.02	23.82	409	.046		4.26	86	.72				
15.0	19.89	34.31	24.28	365	.065		4.40	87	.65				
20.0	19.49	34.20	24.30	363	.083		4.24	83	.85				
25.0	18.26	34.39	24.76	319	.100		3.90	75	1.29				
30.0	17.25	34.56	25.14	284	.115		3.56	67	1.73				
50.0	14.26	34.76	25.97	205	.164		1.73	31	3.87				
75.0	13.99	34.78	26.04	198	.215		1.36	24	4.27				

GULF OF GUAYAQUIL CRUISE 6109 STATION 14- 1 LAT. 03 29.0 S LONG. 80 43.0 W DATE 12 DEC 1961
 TIME 2010- WEATHER 02 CLOUD COVER WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH M SEA TEMP. 21.6 C AIR TEMP.(WET) 20.1 C AIR TEMP.(DRY) 21.3 C
 RELATIVE HUMIDITY 89 0/0 BAROMETER 740 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S										
DEPTH METERS	TEMP. DEG C	SAL. 0/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00	ML/L SAT.	ADU ML/L	P04 N02 S104 * MICROGRM-AT/L *
0	21.30	34.29	23.89	402				87	.64	
5.0	21.19	34.24	23.88	403				82	.90	
10.0	20.40	34.38	24.20	373				80	.98	
20.0	17.59	34.74	25.19	278				71	1.51	
30.0	14.63	34.92	26.01	201				32	3.79	
50.0	14.14	35.03	26.20	183				26	4.12	
75.0	13.86	34.94	26.19	184				23	4.34	
100.0	13.58	34.88	26.20	183				23	4.36	

I N T E R P O L A T E D			A N D			C O M P U T E D			V A L U E S			A T			S T A N D A R D			D E P T H S		
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* ML/L	O X SAT.	Y G E N O/00	* ML/L	AOU	P04	N02	SIU4						
0	21.30	34.29	23.89	402	0		4.29	87			.64									
2.5	21.25	34.26	23.89	403	.010		4.17	84			.77									
5.0	21.19	34.24	23.88	403	.020		4.04	82			.90									
7.5	20.85	34.26	23.99	393	.030		4.03	81			.94									
10.0	20.40	34.38	24.20	373	.040		4.02	80			.98									
15.0	19.37	34.46	24.53	341	.058		3.88	76			1.25									
20.0	17.59	34.74	25.19	278	.073		3.74	71			1.51									
25.0	16.11	34.83	25.61	239	.086		2.75	51			2.65									
30.0	14.63	34.92	26.01	201	.097		1.76	32			3.79									
50.0	14.14	35.03	26.20	183	.136		1.48	26			4.12									
75.0	13.86	34.94	26.19	184	.182		1.30	23			4.34									
100.0	13.58	34.88	26.20	183	.228		1.31	23			4.36									

GULF OF GUAYAQUIL CRUISE 6109 STATION 10-1 LAT. 03 08.0 S LONG. 80 27.0 W DATE 12 DEC 1961
 TIME 2225- WEATHER CLOUD COVER WIND VELOCITY 14KT (7.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SEA TEMP. 21.2 C AIR TEMP.(WET) 20.1 C AIR TEMP.(DRY) 21.6 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 741 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS										
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00	ML/L SAT.	ML/L AOU	* P O 4 N O 2 S I O 4 * MICROGRM-AT/L *
0	23.52	33.93	22.99	488				90	.46	
5.0	21.49	33.86	23.51	438				85	.76	
10.0	21.46	33.98	23.61	429				82	.87	
20.0	21.48	34.00	23.62	428				91	.44	
30.0	17.90	34.65	25.05	292				72	1.46	
50.0	15.58	34.96	25.83	218				51	2.69	
75.0	13.96	34.83	26.08	194				32	3.83	
100.0	13.68	34.83	26.14	188				26	4.21	

I N T E R P O L A T E D		A N D		C O M P U T E D		V A L U E S		A T		S T A N D A R D		D E P T H S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* ML/L	O X ML/L	Y G E N O/00 SAT.	* ML/L	P04 * MICROGRM-AT/L	N02	S104
0	23.52	33.93	22.99	488	0			4.30	90	.46			
2.5	22.51	33.89	23.26	463	.012			4.23	87	.61			
5.0	21.49	33.86	23.51	438	.023			4.17	85	.76			
7.5	21.47	33.93	23.57	433	.034			4.11	84	.81			
10.0	21.46	33.98	23.61	429	.045			4.06	82	.87			
15.0	21.47	33.99	23.62	428	.066			4.27	87	.65			
20.0	21.48	34.00	23.62	428	.088			4.48	91	.44			
25.0	19.52	34.34	24.40	353	.107			4.12	81	.95			
30.0	17.90	34.65	25.05	292	.123			3.76	72	1.46			
50.0	15.58	34.96	25.83	218	.175			2.76	51	2.69			
75.0	13.96	34.83	26.08	194	.227			1.80	32	3.83			
100.0	13.68	34.83	26.14	188	.275			1.45	26	4.21			

GULF OF GUAYAQUIL CRUISE 6109 STATION 6-1 LAT. 02 56.0 S LONG. 80 39.0 W DATE 13 DEC 1961
 TIME 0105- WEATHER CLOUD COVER WIND VELOCITY 12KT (6.0 M/SEC) WIND DIR. 95-105 T
 SECCHI DISK DEPTH M SEA TEMP. 22.2 C AIR TEMP.(WET) 20.6 C AIR TEMP.(DRY) 22.3 C
 RELATIVE HUMIDITY 90 0/0 BAROMETER 740 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * ML/L SAT. O/00 ADU ML/L	P04 * MICROGRM-AT/L *	S104
0	22.81	33.46	22.84	502			4.85 100 -.02		
5.0	22.70	33.58	22.97	491			4.79 99 .05		
10.0	22.70	33.64	23.01	486			4.86 101 -.03		
20.0	22.68	33.51	22.92	495			5.07 105 -.23		
30.0	17.72	34.70	25.13	284			3.48 66 1.76		
50.0	14.36	35.07	26.18	184			1.80 32 3.78		
75.0	13.86	34.99	26.23	180			1.73 31 3.91		
100.0	13.69	35.03	26.29	174			1.93 34 3.72		

I N T E R P O L A T E D			A N D C O M P U T E D			V A L U E S A T S T A N D A R D			D E P T H S			
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* ML/L	O X Y G E N O/00	* ML/L	P04 # MICROGRM-AT/L	N02 #	S104 #
0	22.81	33.46	22.84	502	0		4.85	100	-0.02			
2.5	22.76	33.46	22.86	501	.013		4.82	100	.01			
5.0	22.70	33.58	22.97	491	.025		4.79	99	.05			
7.5	22.70	33.61	22.99	489	.037		4.83	100	.01			
10.0	22.70	33.64	23.01	486	.049		4.86	101	-0.03			
15.0	22.69	33.57	22.96	491	.074		4.96	103	-0.13			
20.0	22.68	33.51	22.92	495	.099		5.07	105	-0.23			
25.0	20.20	34.10	24.05	387	.121		4.27	86	.76			
30.0	17.72	34.70	25.13	284	.138		3.48	66	1.76			
50.0	14.36	35.07	26.18	184	.185		1.80	32	3.78			
75.0	13.86	34.99	26.23	180	.231		1.73	31	3.91			
100.0	13.69	35.03	26.29	174	.275		1.93	34	3.72			

GULF OF GUAYAQUIL CRUISE 6109 STATION 2-1 LAT. 02 41.0 S LONG. 80 43.0 W DATE 13 DEC 1961
 TIME 0355- WEATHER CLOUD COVER WIND VELOCITY 12KT (6.0 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH M SEA TEMP. 22.6 C AIR TEMP.(WET) 20.6 C AIR TEMP.(DRY) 22.8 C
 RELATIVE HUMIDITY 82 0/0 BAROMETER 740 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * ML/L SAT. O/00	ML/L AOU ML/L	P04 NO2	S104 MICROGRM-AT/L *
0	22.98	33.66	22.95	493			93	.32		
5.0	22.90	33.48	22.83	503			88	.59		
10.0	22.70	33.66	23.03	485			88	.57		
20.0	19.09	34.36	24.53	342			67	1.67		
30.0	17.00	34.38	25.06	291			45	2.94		
50.0	14.88	35.05	26.05	196			32	3.77		
75.0	13.76	34.88	26.16	186			31	3.88		
100.0	13.48	34.87	26.21	181			30	3.95		

I N T E R P O L A T E D			A N D			C O M P U T E D			V A L U E S			A T			S T A N D A R D			D E P T H S		
DEPTH	TEMP.	SAL.	SIG-T	THERMO	DYNAMIC	TOTAL	* O X Y G E N	* P O 4	N O 2	S I O 4										
METERS	DEG C	O/00	G/L	ANOMALY	HEIGHT	CO2	ML/L													
				CL/T		MGC/M3														
0	22.98	33.66	22.94	493	0		4.49	93												
2.5	22.94	33.54	22.87	500	.012		4.36	91												
5.0	22.90	33.48	22.83	503	.025		4.23	88												
7.5	22.80	33.53	22.90	497	.037		4.24	88												
10.0	22.70	33.66	23.03	485	.050		4.26	88												
15.0	20.90	34.01	23.79	412	.072		3.85	78												
20.0	19.09	34.36	24.53	342	.091		3.45	67												
25.0	17.94	34.36	24.82	314	.108		2.91	56												
30.0	17.00	34.38	25.06	291	.123		2.38	45												
50.0	14.88	35.05	26.05	196	.172		1.75	32												
75.0	13.76	34.88	26.16	186	.220		1.77	31												
100.0	13.48	34.87	26.21	181	.267		1.73	30												

GULF OF GUAYAQUIL CRUISE 6109 STATION 3-1 LAT. 02 46.0 S LONG. 80 35.0 W DATE 13 DEC 1961
 TIME 0710- WEATHER 03 CLOUD COVER 9/10 WIND VELOCITY 9KT (4.5 M/SEC) WIND DIR. 175-185 T
 SECCHI DISK DEPTH M SEA TEMP. 22.6 C AIR TEMP.(WET) 20.6 C AIR TEMP.(DRY) 22.8 C
 RELATIVE HUMIDITY 82 0/0 BAROMETER 741 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX ML/L	Y SAT.	G ML/L	E -1.08	N ADU	* ML/L	P04 # MICROGRM-AT/L	NO2 #	SI04 #
0	22.91	33.64	22.95	492			5.90	122							
5.0	22.83	33.42	22.81	506			4.21	87		.62					
10.0	22.81	33.60	22.95	492			4.63	96		.20					
20.0	20.89	33.98	23.77	414			3.89	78		1.08					
30.0	17.75	34.60	25.05	292			2.83	54		2.41					
50.0	14.50	34.88	26.01	201			1.56	28		4.01					
75.0	13.80	35.03	26.27	176			1.56	28		4.08					
100.0	13.62	34.85	26.17	186			1.50	26		4.17					

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S											
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* ML/L	O X O/00 SAT.	* ML/L ACU	P04 NO2	SIO4 MICROGRM-AT/L *
0	22.91	33.64	22.95	492	0		5.90	122	-1.08		
2.5	22.87	33.49	22.85	502	.012		5.05	105	-.23		
5.0	22.83	33.42	22.81	506	.025		4.21	87	.62		
7.5	22.82	33.48	22.86	501	.038		4.42	92	.41		
10.0	22.81	33.60	22.95	492	.050		4.63	96	.20		
15.0	22.14	33.63	23.16	472	.074		4.26	87	.64		
20.0	20.89	33.98	23.77	414	.096		3.89	78	1.08		
25.0	19.32	34.29	24.42	352	.116		3.36	66	1.75		
30.0	17.75	34.60	25.05	292	.132		2.83	54	2.41		
50.0	14.50	34.88	26.01	201	.181		1.56	28	4.01		
75.0	13.80	35.03	26.27	176	.229		1.56	28	4.08		
100.0	13.62	34.85	26.17	186	.275		1.50	26	4.17		

GULF OF GUAYAQUIL CRUISE 6109 STATION 4-1 LAT. 02 52.0 S LONG. 80 27.0 W DATE 13 FEB 1961
 TIME 0905- WEATHER 01 CLOUD COVER 1/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 155-165 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 22.7 C AIR TEMP.(WET) 21.6 C AIR TEMP.(DRY) 24.2 C
 RELATIVE HUMIDITY 80 0/0 BAROMETER 742 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4 * MICROGRM-AT/L	SI04
0	22.78	33.62	22.97	490			4.92 102		
5.0	22.77	33.62	22.98	490			4.81 100		
10.0	22.75	33.55	22.93	494			4.90 101		
15.0	22.72	33.55	22.94	493			3.67 76		
20.0	19.47	34.38	24.45	349			3.51 69		
30.0	17.64	34.69	25.14	283			2.84 54		
45.0	15.00	34.99	25.98	203			1.26 23		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4 * MICROGRM-AT/L	SI04
0	22.78	33.62	22.97	490	0		4.92 102		
2.5	22.78	33.62	22.97	490	.012		4.86 101		
5.0	22.77	33.62	22.97	490	.024		4.81 100		
7.5	22.76	33.58	22.95	492	.037		4.86 100		
10.0	22.75	33.55	22.93	494	.049		4.90 101		
15.0	22.72	33.55	22.94	493	.074		3.67 76		
20.0	19.47	34.38	24.45	349	.095		3.51 69		
25.0	18.47	34.55	24.83	313	.112		3.17 62		
30.0	17.64	34.69	25.14	283	.126		2.84 54		

GULF OF GUAYAQUIL CRUISE 6109 STATION 5-1 LAT. 02 52.0 S LONG. 80 51.0 W DATE 13 DEC 1961
 TIME 1115- WEATHER 01 CLOUD COVER 1/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 15- 25 T
 SECCHI DISK DEPTH 1.9 M SEA TEMP. 24.7 C AIR TEMP.(WET) 22.3 C AIR TEMP.(DRY) 24.9 C
 RELATIVE HUMIDITY 80 0/0 BAROMETER 742 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4	NO2	SI04
0	23.28	33.48	22.72	514			4.54 95 .25			
5.0	23.06	33.51	22.81	506			4.70 98 .11			
10.0	23.05	33.62	22.90	497			4.78 99 .03			
15.0	23.05	33.58	22.87	500			4.64 97 .17			
20.0	23.05	33.49	22.80	507			4.38 91 .43			
25.0	19.02	34.23	24.45	349			3.35 65 1.78			

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4	NO2	SI04
0	23.28	33.48	22.72	514	0		4.54 95 .25			
2.5	23.18	33.50	22.77	510	.013		4.62 96 .18			
5.0	23.06	33.51	22.81	506	.025		4.70 98 .11			
7.5	23.06	33.55	22.84	502	.038		4.74 99 .07			
10.0	23.05	33.62	22.89	497	.051		4.78 99 .03			
15.0	23.05	33.58	22.86	500	.076		4.64 97 .17			
20.0	23.05	33.49	22.80	507	.101		4.38 91 .43			
25.0	19.02	34.23	24.45	349	.122		3.35 65 1.78			

GULF OF GUAYAQUIL CRUISE 6110 STATION A-1 LAT. 02 44.2 S LONG. 80 11.5 W DATE 14 DEC 1961
 TIME 0600- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* AOU ML/L	P04	NO2	SI04
0	25.96	32.18	20.95	684			3.64 79	.99			
5.0	25.95	32.21	20.97	682			3.64 79	.99			
10.0	25.95	32.12	20.90	688			3.74 81	.89			
20.0	26.04	32.23	20.96	683			3.56 77	1.06			
30.0	26.02	32.21	20.95	684			3.59 78	1.03			
50.0	26.00	32.25	20.99	680			3.56 77	1.06			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* AOU ML/L	P04	NO2	SI04
0	25.96	32.18	20.95	684	0		3.64 79	.99			
2.5	25.95	32.20	20.96	682	.017		3.64 79	.99			
5.0	25.95	32.21	20.97	682	.034		3.64 79	.99			
7.5	25.95	32.16	20.93	685	.051		3.69 80	.94			
10.0	25.95	32.12	20.90	688	.068		3.74 81	.89			
15.0	26.00	32.18	20.93	686	.103		3.65 79	.98			
20.0	26.04	32.23	20.96	683	.137		3.56 77	1.06			
25.0	26.03	32.22	20.95	683	.171		3.58 77	1.05			
30.0	26.02	32.21	20.95	684	.205		3.59 78	1.03			
50.0	26.00	32.25	20.98	680	.342		3.56 77	1.06			

GULF OF GUAYAQUIL CRUISE 6110 STATION B-1 LAT. 02 42.4 S LONG. 80 11.5 W DATE 14 DEC 1961
 TIME 0640- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4 AQU	N O 2 SIC4
0	26.38	32.27	20.88	690			ML/L SAT. 82	ML/L .85	* MICROGRM-AT/L #
5.0	26.35	32.29	20.91	688			3.75 81	3.74 .86	
10.0	26.31	32.21	20.86	692			3.84 83	3.84 .76	

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4 AQU	N O 2 SIC4
0	26.38	32.27	20.88	690	0		ML/L SAT. 82	ML/L .85	* MICROGRM-AT/L #
2.5	26.36	32.28	20.89	689	.017		3.75 81	3.74 .85	
5.0	26.35	32.29	20.91	688	.034		3.74 81	3.74 .86	
7.5	26.33	32.25	20.88	690	.052		3.79 82	3.79 .81	
10.0	26.31	32.21	20.86	692	.069		3.84 83	3.84 .76	

GULF OF GUAYAQUIL CRUISE 6110 STATION C-1 LAT. 02 40.8 S LONG. 80 07.4 W DATE 14 DEC 1961
 TIME 0724- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. 0/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N 0/00 SAT. ML/L	* P O 4 ADU ML/L	N O 2 MICROGRM-AT/L	S I O 4
0	26.29	32.12	20.80	698			3.73	81		
5.0	26.30	32.21	20.86	692			3.74	81		

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. 0/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N 0/00 SAT. ML/L	* P O 4 ADU ML/L	N O 2 MICROGRM-AT/L	S I O 4
0	26.29	32.12	20.80	698	0		3.73	81		
2.5	26.29	32.16	20.83	695	.017		3.73	81		
5.0	26.30	32.21	20.86	692	.035		3.74	81		

GULF OF GUAYAQUIL CRUISE 6110 STATION D-1 LAT. 02 40.0 S LONG. 80 02.3 W DATE 14 DEC 1961
 TIME 0808- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. -
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	26.44	32.41	20.97	682			ML/L SAT. 77	ML/L		* MICROGRM-AT/L *
5.0	26.38	32.48	21.04	675			77 1.06	77 1.05		

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	26.44	32.41	20.97	682	0		ML/L SAT. 77	ML/L		* MICROGRM-AT/L *
2.5	26.41	32.44	21.00	678	.017		77 1.05	77 1.05		
5.0	26.38	32.48	21.04	675	.034		77 1.05	77 1.05		

GULF OF GUAYAQUIL CRUISE 6110 STATION E-1 LAT. 02 41.6 S LONG. 79 58.8 W DATE 14 DEC 1961
 TIME 0842- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SE TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00	* ML/L SAT.	* PO4	NO2	SIC4
0	26.49	31.82	20.51	726				75			*
5.0	26.22	32.30	20.95	683				74			ML/L 1.17 1.21

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00	* ML/L SAT.	* PO4	NO2	SIC4
0	26.49	31.82	20.51	726	0			75			*
2.5	26.35	32.06	20.73	705	.018			74			ML/L 1.17 1.19
5.0	26.22	32.30	20.95	683	.035			74			ML/L 1.21

GULF OF GUAYAQUIL CRUISE 6110 STATION F-1 LAT. 02 44.3 S LONG. 79 54.0 W DATE 14 DEC 1961
 TIME 1008- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - I
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N ML/L SAT. O/00	* P O 4 ML/L	N O 2 ML/L	S I O 4 ML/L
0	26.15	33.13	21.60	621			92	4.22		.37
5.0	26.08	33.13	21.62	619			85	3.91		.68
10.0	26.06	33.03	21.55	626			91	4.17		.43
15.0	26.12	33.06	21.56	625			81	3.73		.86
20.0	26.08	33.12	21.61	620			81	3.74		.85

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N ML/L SAT. O/00	* P O 4 ML/L	N O 2 ML/L	S I O 4 ML/L
0	26.15	33.13	21.60	621	0		92	4.22		.37
2.5	26.11	33.13	21.61	620	.016		89	4.06		.52
5.0	26.08	33.13	21.62	619	.031		85	3.91		.68
7.5	26.07	33.07	21.58	623	.047		88	4.04		.55
10.0	26.06	33.03	21.55	626	.062		91	4.17		.43
15.0	26.12	33.06	21.56	625	.093		81	3.73		.86
20.0	26.08	33.12	21.61	620	.125		81	3.74		.85

GULF OF GUAYAQUIL CRUISE 6110 STATION G-1 LAT. 02 45.5 S LONG. 79 51.8 W DATE 14 DEC 1961
 TIME 1034- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. -
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* OX Y GEN * O/00	PO4	NO2	SI04
0	26.60	32.52	21.00	679		MGC/M3	ML/L SAT. 86			* MICROGRM-AT/L *
5.0	26.32	32.59	21.14	665			3.93 81			.64 .89

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* OX Y GEN * O/00	PO4	NO2	SI04
0	26.60	32.52	21.00	679	0	MGC/M3	ML/L SAT. 86			* MICROGRM-AT/L *
2.5	26.46	32.55	21.07	672	.017		3.82 83			.64 .77
5.0	26.32	32.59	21.14	665	.034		3.70 81			.89

GULF OF GUAYAQUIL CRUISE 6110 STATION H- 1 LAT. 02 46.4 S LONG. 79 50.0 W DATE 14 DEC 1961
 TIME 1058- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. -
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	27.20	31.69	20.19	757		MGC/M3	ML/L SAT. 86	ML/L	* MICROGRM-AT/L *	
5.0	26.77	31.91	20.49	728			3.90 78	3.55 78		1.03

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	27.20	31.69	20.19	757	0	MGC/M3	ML/L SAT. 86	ML/L	* MICROGRM-AT/L *	
2.5	26.98	31.80	20.34	742	.019		3.90 82	3.72 82		.84
5.0	26.77	31.91	20.49	728	.037		3.55 78	3.55 78		1.03

GULF OF GUAYAQUIL CRUISE 6110 STATION I-1 LAT. 02 53.2 S LONG. 79 55.2 W DATE 14 DEC 1961
 TIME 1235- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. -
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED		AND COMPUTED		VALUES AT OBSERVED		DEPTH S				
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OXYGEN O/00 SAT. ML/L	* PO4 AU	N02	SI04
0	26.25	33.21	21.63	619			4.04 88	.54		
5.0	25.98	33.22	21.72	610			3.81 83	.79		
10.0	25.78	33.44	21.95	588			3.74 81	.86		

INTERPOLATED		AND COMPUTED		VALUES AT STANDARD		DEPTH S				
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OXYGEN O/00 SAT. ML/L	* PO4 AU	N02	SI04
0	26.25	33.21	21.63	619	0		4.04 88	.54		
2.5	26.11	33.21	21.67	614	.015		3.93 86	.66		
5.0	25.98	33.22	21.72	610	.031		3.81 83	.79		
7.5	25.87	33.35	21.85	597	.046		3.77 82	.83		
10.0	25.78	33.44	21.95	588	.061		3.74 81	.86		

GULF OF GUAYAQUIL CRUISE 6110 STATION J-1 LAT. 03 03.3 S LONG. 79 54.8 W DATE 14 DEC 1961
 TIME 1355- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. 0/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N # 0/00	P04 NO2	SI04
0	27.70	33.44	21.34	646			SAT. 94		
5.0	26.22	33.58	21.92	591			ML/L 4.19 SAT. 82	* MICROGRM-AT/L	

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. 0/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N # 0/00	P04 NO2	SI04
0	27.70	33.44	21.34	646	0		SAT. 94		
2.5	26.96	33.51	21.63	618	.016		ML/L 4.19 SAT. 88	* MICROGRM-AT/L	
5.0	26.22	33.58	21.92	591	.031		ML/L 3.97 SAT. 82		

GULF OF GUAYAQUIL CRUISE 6110 STATION K-1 LAT. 03 02.1 S LONG. 79 57.2 W DATE 14 DEC 1961
 TIME 1423- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. -
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* AOU ML/L	P04	NO2	SI04
0	25.45	33.57	22.15	569			4.07	88			
5.0	25.32	33.51	22.14	569			3.92	85			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* AOU ML/L	P04	NO2	SI04
0	25.45	33.57	22.15	569	0		4.07	88			
2.5	25.38	33.54	22.14	569	.014		3.99	86			
5.0	25.32	33.51	22.14	569	.028		3.92	85			

GULF OF GUAYAQUIL CRUISE 6110 STATION L-1 LAT. 03 00.2 S LONG. 80 00.5 W DATE 14 DEC 1961
 TIME 1505- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. -
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

U R S E R V E D A N D C O M P U T E D V A L U E S A T O R S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. 0/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N 0/00 SAT. ML/L	* P O 4 ML/L	N O 2 MICROGRM-AT/L	S I O 4
0	25.39	33.66	22.23	561			3.87	84	.76	
5.0	25.05	33.55	22.25	559			3.73	80	.93	

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. 0/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N 0/00 SAT. ML/L	* P O 4 ML/L	N O 2 MICROGRM-AT/L	S I O 4
0	25.39	33.66	22.23	561	0		3.87	84	.76	
2.5	25.22	33.60	22.24	560	.014		3.80	82	.84	
5.0	25.05	33.55	22.25	559	.028		3.73	80	.93	

GULF OF GUAYAQUIL CRUISE 6110 STATION M-1 LAT. 02 58.3 S LONG. 80 03.5 W DATE 14 DEC 1961
 TIME 1535- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AUU ML/L	NO2	SI04
0	25.92	33.48	21.94	589			90	.47		
5.0	24.79	33.43	22.24	560			78	1.05		
10.0	24.58	33.47	22.33	551			76	1.12		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AUU ML/L	NO2	SI04
0	25.92	33.48	21.93	589	0		90	.47		
2.5	25.35	33.45	22.09	574	.015		84	.76		
5.0	24.79	33.43	22.24	560	.029		78	1.05		
7.5	24.67	33.45	22.29	555	.043		77	1.09		
10.0	24.58	33.47	22.33	551	.057		76	1.12		

GULF OF GUAYAQUIL CRUISE 6110 STATION N-1 LAT. 03 02.9 S LONG. 80 07.0 W DATE 14 DEC 1961
 TIME 1637- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. -
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT. ML/L	* P O 4 ML/L	* MICROGRM-AT/L	SIO4
0	24.85	33.58	22.34	551			91			
5.0	24.60	33.60	22.43	542			76			
10.0	24.46	33.55	22.43	542			81			

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT. ML/L	* P O 4 ML/L	* MICROGRM-AT/L	SIO4
0	24.85	33.58	22.34	551	0		91			
2.5	24.73	33.59	22.38	547	.014		84			
5.0	24.60	33.60	22.43	542	.027		76			
7.5	24.52	33.57	22.43	542	.041		78			
10.0	24.46	33.55	22.43	542	.054		81			

GULF OF GUAYAQUIL CRUISE 6110 STATION 0-1 LAT. 03 05.8 S LONG. 80 05.5 W DATE 14 DEC 1961
 TIME 1705- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* AOU ML/L	PO4	NO2	SI04
0	24.69	33.58	22.38	546			4.19	90			
5.0	24.45	33.62	22.49	536			4.13	88			
								.49			
								.57			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* AOU ML/L	PO4	NO2	SI04
0	24.69	33.58	22.38	546	0		4.19	90			
2.5	24.57	33.60	22.43	541	.014		4.16	89			
5.0	24.45	33.62	22.49	536	.027		4.13	88			
								.49			
								.53			
								.57			

GULF OF GUAYAQUIL CRUISE 6110 STATION P-1 LAT. 03 08.6 S LONG. 80 04.0 W DATE 14 DEC 1961
 TIME 1742- WEATHER CLOUD COVER WIND VELOCITY KT (M/SEC) WIND DIR. -
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY O/O BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00	* PO4 ACU	NO2	SIO4
0	25.58	33.60	22.13	571			ML/L SAT. 95	ML/L .21	* MICROGRM-AT/L *	
5.0	25.39	33.58	22.17	566			4.40 91	4.23 .40		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00	* PO4 ACU	NO2	SIO4
0	25.58	33.60	22.13	571	0		ML/L SAT. 95	ML/L .21	* MICROGRM-AT/L *	
2.5	25.48	33.59	22.15	569	.014		4.40 93	4.31 .31		
5.0	25.39	33.58	22.17	566	.028		4.40 91	4.23 .40		

GULF OF GUAYAQUIL CRUISE 6110 STATION Q-1 LAT. 03 11.9 S LONG. 80 16.3 W DATE 14 DEC 1961
 TIME 1825- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 65- 75 T
 SECCHI DISK DEPTH M SE/ TEMP. C AIR TEMP.(WET) 23.3 C AIR TEMP.(DRY) 24.6 C
 RELATIVE HUMIDITY 0/0 BAROMETER 740 MM

OBSERVED		AND COMPUTED		VALUES AT OBSERVED		DEPTH S			
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OXYGEN O/00 SAT. ML/L	* PO4 MICROGRM-AT/L	NO2 SIO4
0	26.51	33.48	21.75	607			90 .45		
5.0	26.35	33.55	21.85	597			78 1.00		
10.0	26.21	33.58	21.92	591			77 1.07		

INTERPOLATED		AND COMPUTED		VALUES AT STANDARD		DEPTH S			
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OXYGEN O/00 SAT. ML/L	* PO4 MICROGRM-AT/L	NO2 SIO4
0	26.51	33.48	21.75	607	0		90 .45		
2.5	26.43	33.51	21.80	602	.015		84 .73		
5.0	26.35	33.55	21.85	597	.030		78 1.00		
7.5	26.27	33.57	21.89	593	.045		77 1.03		
10.0	26.21	33.58	21.92	591	.060		77 1.07		

GULF OF GUAYAQUIL CRUISE 6110 STATION R-1 LAT. 03 15.5 S LONG. 80 16.3 W DATE 15 DEC 1961
 TIME 1007- WEATHER 02 CLOUD COVER 7-8/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 135-145 T
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) 22.8 C AIR TEMP.(DRY) 24.4 C
 RELATIVE HUMIDITY 0/0 BAROMETER 742 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS												
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN # ML/L	O/00 SAT.	AOU ML/L	P04	NO2	SI04
0	24.61	33.80	22.57	528			4.23	90	.45			
5.0	24.18	33.23	22.27	557			4.22	89	.51			
10.0	24.14	33.73	22.66	520			4.54	96	.18			
15.0	23.86	33.73	22.74	512			4.39	93	.35			
25.0	20.01	33.77	23.84	407			2.79	55	2.27			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS												
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN # ML/L	O/00 SAT.	AOU ML/L	P04	NO2	SI04
0	24.61	33.80	22.57	528	0		4.23	90	.45			
2.5	24.42	33.44	22.36	548	.013		4.22	90	.48			
5.0	24.18	33.23	22.27	557	.027		4.22	89	.51			
7.5	24.16	33.40	22.40	544	.041		4.38	93	.34			
10.0	24.14	33.73	22.66	520	.054		4.54	96	.18			
15.0	23.86	33.73	22.74	512	.080		4.39	93	.35			
20.0	21.94	33.75	23.31	458	.104		3.59	74	1.31			
25.0	20.01	33.77	23.84	407	.126		2.79	55	2.27			

GULF OF GUAYAQUIL CRUISE 6110 STATION S-1 LAT. 03 11.9 S LONG. 80 16.3 W DATE 15 DEC 1961
 TIME 1108- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) 22.8 C AIR TEMP.(DRY) 24.5 C
 RELATIVE HUMIDITY 0/0 BAROMETER 741 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00	ML/L	SAT.	ML/L	* MICROGRM-AT/L *	P04	N02	SIO4
0	24.38	33.77	22.62	524				4.55	97	.15				
5.0	24.30	33.84	22.70	516				4.38	93	.32				
10.0	24.21	33.78	22.68	518				3.99	85	.72				
20.0	19.71	34.31	24.33	360				2.79	55	2.28				
30.0	17.55	34.51	25.03	294				2.14	41	3.12				

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00	ML/L	SAT.	ML/L	* MICROGRM-AT/L *	P04	N02	SIO4
0	24.38	33.77	22.62	524	0			4.55	97	.15				
2.5	24.34	33.77	22.63	522	.013			4.46	95	.24				
5.0	24.30	33.84	22.70	516	.026			4.38	93	.32				
7.5	24.26	33.81	22.69	517	.039			4.18	89	.52				
10.0	24.21	33.78	22.68	518	.052			3.99	85	.72				
15.0	21.96	34.04	23.52	437	.076			3.39	70	1.50				
20.0	19.71	34.31	24.33	360	.096			2.79	55	2.28				
25.0	18.53	34.41	24.71	324	.113			2.46	48	2.70				
30.0	17.55	34.51	25.02	294	.128			2.14	41	3.12				

GULF OF GUAYAQUIL CRUISE 6110 STATION T-1 LAT. 03 08.6 S LONG. 80 16.3 W DATE 15 DEC 1961
 TIME 1228- WEATHER 03 CLOUD COVER 9/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 105-115 T
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) 22.5 C AIR TEMP.(DRY) 24.4 C
 RELATIVE HUMIDITY 0/0 BAROMETER 741 MM

OBSERVED		AND COMPUTED		VALUES AT OBSERVED		DEPTH S		
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y GEN * O/00 SAT. ML/L	P04 NO2 S104 * MICROGRM-AT/L *
0	25.46	33.58	22.15	569			4.73 102 -.11	
5.0	24.38	33.60	22.49	536			4.55 97 .15	
10.0	24.06	33.73	22.69	517			3.90 83 .82	
20.0	19.35	34.29	24.41	353			2.57 50 2.53	
30.0	17.41	34.60	25.13	284			1.86 35 3.41	

INTERPOLATED		AND COMPUTED		VALUES AT STANDARD		DEPTH S		
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y GEN * O/00 SAT. ML/L	P04 NO2 S104 * MICROGRM-AT/L *
0	25.46	33.58	22.15	569	0		4.73 102 -.11	
2.5	25.03	33.59	22.29	555	.014		4.64 100 .02	
5.0	24.38	33.60	22.49	536	.028		4.55 97 .15	
7.5	24.23	33.65	22.58	528	.041		4.22 90 .49	
10.0	24.06	33.73	22.69	517	.054		3.90 83 .82	
15.0	21.71	34.01	23.57	433	.078		3.23 66 1.68	
20.0	19.35	34.29	24.41	353	.098		2.57 50 2.53	
25.0	18.29	34.45	24.80	315	.114		2.21 43 2.97	
30.0	17.41	34.60	25.13	284	.129		1.86 35 3.41	

GULF OF GUAYAQUIL CRUISE 6110 STATION U-1 LAT. 03 05.3 S LONG. 80 16.3 W DATE 15 DEC 1961
 TIME 1307- WEATHER 03 CLOUD COVER 9/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 75- 85 T
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) 22.1 C AIR TEMP.(DRY) 25.0 C
 RELATIVE HUMIDITY 0/0 BAROMETER 740 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* ADU ML/L	PO4	NO2	SI04
0	27.00	32.88	21.15	665			ML/L SAT. 108	ML/L - .38			* MICROGRM-AT/L *
5.0	24.13	33.68	22.63	523			91	.42			
10.0	23.65	33.82	22.87	500			81	.89			
20.0	18.70	33.58	24.03	389			44	2.92			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* ADU ML/L	PO4	NO2	SI04
0	27.00	32.88	21.15	665	0		ML/L SAT. 108	ML/L - .38			* MICROGRM-AT/L *
2.5	25.56	33.28	21.89	593	.016		100	.02			
5.0	24.13	33.68	22.63	523	.030		91	.42			
7.5	23.85	33.76	22.77	510	.043		86	.66			
10.0	23.65	33.82	22.87	500	.055		81	.89			
15.0	20.78	33.65	23.54	435	.079		62	1.91			
20.0	18.70	33.58	24.03	389	.099		44	2.92			

GULF OF GUAYAQUIL CRUISE 6110 STATION F- 2 LAT. 02 44.3 S LONG. 79 54.0 W DATE 15 DEC 1961
 TIME 2130- WEATHER 03 CLOUD COVER WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 95-105 T
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 24.4 C
 RELATIVE HUMIDITY 0/0 BAROMETER 741 MM

O B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* AOU ML/L	NO2 MICROGRM-AT/L *
0	26.58	33.01	21.38	643			85	.70	
5.0	26.55	32.92	21.32	648			87	.59	
10.0	26.51	32.94	21.35	646			85	.71	
15.0	26.60	32.88	21.27	653			93	.33	
20.0	26.59	32.84	21.25	655			83	.75	

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* AOU ML/L	NO2 MICROGRM-AT/L *
0	26.58	33.01	21.38	643	0		85	.70	
2.5	26.56	32.96	21.35	646	.016		86	.65	
5.0	26.55	32.92	21.32	648	.032		87	.59	
7.5	26.53	32.93	21.33	647	.048		86	.65	
10.0	26.51	32.94	21.34	646	.065		85	.71	
15.0	26.60	32.88	21.27	653	.097		93	.33	
20.0	26.59	32.84	21.24	655	.130		83	.75	

GULF OF GUAYAQUIL CRUISE 6110 STATION F- 3 LAT. 02 44.3 S LONG. 79 54.0 W DATE 16 DEC 1961
 TIME 0625- WEATHER 03 CLOUD COVER 9/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 115-125 T
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP.(WET) 21.4 C AIR TEMP.(DRY) 23.8 C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00 ML/L	* P O 4 NO2	* S I O 4
0	26.52	32.66	21.13	666			SAT. ML/L	* MICROGRM-AT/L	*
5.0	26.50	32.65	21.13	666					
10.0	26.52	32.66	21.13	666					

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00 ML/L	* P O 4 NO2	* S I O 4
0	26.52	32.66	21.13	666	0		SAT. ML/L	* MICROGRM-AT/L	*
2.5	26.51	32.65	21.13	666	.017				
5.0	26.50	32.65	21.13	666	.033				
7.5	26.51	32.65	21.13	666	.050				
10.0	26.52	32.66	21.13	666	.067				

GULF OF GUAYAQUIL CRUISE 6111 STATION A-1 LAT. 02 44.2 S LONG. 80 11.5 W DATE 18 DEC 1961
 TIME 1045- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. C AIR TEMP. (WET) 21.8 C AIR TEMP. (DRY) 26.1 C
 RELATIVE HUMIDITY 70 0/0 BAROMETER 741 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS											
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX ML/L	YGEN O/00 SAT.	* PO4 ML/L	NO2 ML/L	SI04 MICROGRM-AT/L *
0	26.78	31.89	20.47	730			4.37	95	.21		
2.5	26.15	31.91	20.68	709			3.99	86	.63		
5.0	26.10	31.94	20.72	706			3.95	85	.68		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS											
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX ML/L	YGEN O/00 SAT.	* PO4 ML/L	NO2 ML/L	SI04 MICROGRM-AT/L *
0	26.78	31.89	20.47	730	0		4.37	95	.21		
2.5	26.15	31.91	20.68	709	.018		3.99	86	.63		
5.0	26.10	31.94	20.72	706	.036		3.95	85	.68		

GULF OF GUAYAQUIL CRUISE 6111 STATION B-1 LAT. 02 42.4 S LONG. 80 11.5 W DATE 18 DEC 1961
 TIME 1155- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 35- 45 T
 SECCHI DISK DEPTH M SEA TEMP. 26.6 C AIR TEMP.(WET) 22.9 C AIR TEMP.(DRY) 27.8 C
 RELATIVE HUMIDITY 67 0/0 BAROMETER 740 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN * O/00 SAT. ML/L	PO4	NO2 SIO4
0	26.45	31.89	20.58	720			4.13 90		* MICROGRM-AT/L *
2.5	26.42	31.72	20.46	731			3.62 79		.47 .99

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN * O/00 SAT. ML/L	PO4	NO2 SIO4
0	26.45	31.89	20.57	720	0		4.13 90		* MICROGRM-AT/L *
2.5	26.42	31.72	20.46	731	.018		3.62 79		.47 .99

GULF OF GUAYAQUIL CRUISE 6111 STATION C-1 LAT. 02 40.8 S LONG. 80 07.4 W DATE 18 DEC 1961
 TIME 1250- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 26.7 C AIR TEMP.(WET) 24.4 C AIR TEMP.(DRY) 28.4 C
 RELATIVE HUMIDITY 72 0/0 BAROMETER 740 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4 ML/L	NO2 ML/L	SIO4 ML/L
0	27.55	31.74	20.12	764			98	.10		
2.5	26.45	31.84	20.54	723			82	.84		
5.0	26.45	31.82	20.52	725			82	.84		
10.0	26.45	31.75	20.47	730			81	.87		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4 ML/L	NO2 ML/L	SIO4 ML/L
0	27.55	31.74	20.12	764	0		98	.10		
2.5	26.45	31.84	20.54	723	.019		82	.84		
5.0	26.45	31.82	20.52	725	.037		82	.84		
7.5	26.45	31.78	20.49	728	.055		81	.86		
10.0	26.45	31.75	20.47	730	.073		81	.87		

GULF OF GUAYAQUIL CRUISE 6111 STATION D-1 LAT. 02 40.0 S LONG. 80 02.3 W DATE 18 DEC 1961
 TIME 1345- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY 12KT (6.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH M SEA TEMP. 27.4 C AIR TEMP.(WET) 23.9 C AIR TEMP.(DRY) 28.9 C
 RELATIVE HUMIDITY 66 0/0 BAROMETER 739 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* AOU ML/L	P04 NO2 SIO4 * MICROGRM-AT/L *
0	27.30	31.65	20.13	763			4.32 95	.23	
2.5	26.58	31.67	20.37	739			4.00 87	.60	
5.0	26.48	31.58	20.33	743			3.79 82	.82	
10.0	26.55	31.65	20.36	740			3.78 82	.82	
15.0	26.50	31.67	20.39	737			3.88 84	.73	

INTERPOLATED		AND COMPUTED		VALUES		AT STANDARD		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* AOU ML/L	P04 NO2 SIO4 * MICROGRM-AT/L *
0	27.30	31.65	20.13	763	0		4.32 95	.23	
2.5	26.58	31.67	20.37	739	.019		4.00 87	.60	
5.0	26.48	31.58	20.33	743	.037		3.79 82	.82	
7.5	26.52	31.62	20.35	741	.056		3.78 82	.82	
10.0	26.55	31.65	20.36	740	.074		3.78 82	.82	
15.0	26.50	31.67	20.39	737	.111		3.88 84	.73	

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DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	AND	COMPUTED	VALUES	AT	ST	AND	ARD	NO2	SI04	
					THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* ML/L	O SAT.	X ML/L	Y O/00	GEN AQU	* ML/L
													* MICROGRM-AT/L
0	26.90	31.56	20.19		757	0		4.91	107				
2.5	26.67	31.57	20.26		749	.019		4.55	99			.05	
5.0	26.45	31.58	20.34		742	.037		4.19	91			.42	
7.5	26.48	31.58	20.33		743	.056		3.94	85			.67	
10.0	26.50	31.58	20.33		743	.075		3.69	80			.92	
15.0	27.50	31.51	19.96		779	.113		3.65	80			.89	

GULF OF GUAYAQUIL CRUISE 6111 STATION 4-1 LAT. 02 52.0 S LONG. 80 27.0 W DATE 19 DEC 1961
 TIME 0925- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 135-145 T
 SECCHI DISK DEPTH .7 M SEA TEMP. 26.3 C AIR TEMP.(WET) 21.7 C AIR TEMP.(DRY) 23.9 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 739 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AOU	PO4	NO2	SI04
0	24.10	33.60	22.58	528			ML/L SAT. 198 -4.62			* MICROGRM-AT/L *
5.0	24.00	33.54	22.56	530			9.35 198 .17			
10.0	24.10	33.54	22.53	532			4.57 97 .20			
15.0	24.15	33.63	22.58	527			4.53 96 .27			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY L/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AOU	PO4	NO2	SI04
0	24.10	33.60	22.57	528	0		ML/L SAT. 198 -4.62			* MICROGRM-AT/L *
2.5	24.05	33.57	22.57	529	.013		9.35 147 -2.23			
5.0	24.00	33.54	22.56	530	.026		6.96 97 .17			
7.5	24.05	33.54	22.54	531	.040		4.57 96 .18			
10.0	24.10	33.54	22.53	532	.053		4.55 96 .20			
15.0	24.15	33.63	22.58	527	.080		4.53 94 .27			

GULF OF GUAYAQUIL CRUISE 6111 STATION 7-1 LAT. 03 08.0 S LONG. 80 51.0 W DATE 19 DEC 1961
 TIME 1115- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY 1KT (.5 M/SEC) WIND DIR. 135-145 T
 SECCHI DISK DEPTH 2.2 M SEA TEMP. 26.9 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 25.6 C
 RELATIVE HUMIDITY 76 0/0 BAROMETER 739 MM

O B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. 0/00	SIG-T G/L	THERMO ANOMALY L/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * 0/00 SAT.	ML/L	PO4	NO2	SI04
0	23.90	33.42	22.50	535			96	4.54			
5.0	23.85	33.48	22.56	530			98	4.64			
10.0	23.80	33.46	22.56	530			98	4.64			
15.0	23.80	33.43	22.58	528			95	4.52			
20.0	23.75	33.44	22.56	530			96	4.57			
30.0		33.34						4.70			

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. 0/00	SIG-T G/L	THERMO ANOMALY L/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * 0/00 SAT.	ML/L	PO4	NO2	SI04
0	23.90	33.42	22.50	535	0		96	4.54			
2.5	23.88	33.43	22.51	534	.013		97	4.59			
5.0	23.85	33.48	22.56	530	.027		98	4.64			
7.5	23.82	33.47	22.56	530	.040		98	4.64			
10.0	23.80	33.46	22.56	530	.053		98	4.64			
15.0	23.80	33.49	22.58	528	.080		95	4.52			
20.0	23.75	33.44	22.5	530	.106		96	4.57			

GULF OF GUAYAQUIL CRUISE 6111 STATION 6-1 LAT. 02 56.0 S LONG. 80 39.0 W DATE 19 DEC 1961
 TIME 1245- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 23.9 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 25.0 C
 RELATIVE HUMIDITY 78 0/0 BAROMETER 739 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	AQU ML/L	P04 NO2 SIO4 * MICROGRM-AT/L *
0	24.35	33.39	22.34	550			4.53 96	.18	
5.0	23.85	33.36	22.47	538			4.51 95	.24	
10.0	23.85	33.34	22.45	540			4.39 92	.36	
15.0	23.87	33.36	22.46	539			4.57 96	.18	
20.0	23.80	33.36	22.48	537			4.51 95	.25	
30.0	19.75	34.32	24.33	361			3.46 68	1.60	
50.0	15.40	34.90	25.82	218			1.18 22	4.29	

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	AQU ML/L	P04 NO2 SIO4 * MICROGRM-AT/L *
0	24.35	33.39	22.34	550	0		4.53 96	.18	
2.5	24.13	33.38	22.40	545	.014		4.52 96	.21	
5.0	23.85	33.36	22.47	538	.027		4.51 95	.24	
7.5	23.85	33.35	22.46	539	.041		4.45 94	.30	
10.0	23.85	33.34	22.45	540	.054		4.39 92	.36	
15.0	23.87	33.36	22.46	539	.081		4.57 96	.18	
20.0	23.80	33.36	22.48	537	.108		4.51 95	.25	
25.0	21.77	33.84	23.42	447	.133		3.98 82	.92	
30.0	19.75	34.32	24.33	361	.153		3.46 68	1.60	
50.0	15.40	34.90	25.82	218	.211		1.18 22	4.29	

GULF OF GUAYAQUIL CRUISE 6111 STATION 2-1 LAT. 02 41.0 S LONG. 80 43.0 W DATE 19 DEC 1961
 TIME 1510- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 1.6 M SEA TEMP. 24.2 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 24.4 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 737 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 ACU	P04	NO2	SI04
0	24.40	33.37	22.31	553			92			
5.0	24.25	33.34	22.33	551			93			
10.0	24.05	33.37	22.42	543			98			
15.0	24.10	33.37	22.40	545			89			
20.0	23.90	33.36	22.45	540			98			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 ACU	P04	NO2	SI04
0	24.40	33.37	22.31	553	0		92			
2.5	24.33	33.35	22.32	552	.014		93			
5.0	24.25	33.34	22.33	551	.028		93			
7.5	24.15	33.36	22.37	547	.041		95			
10.0	24.05	33.37	22.42	543	.055		98			
15.0	24.10	33.37	22.40	545	.082		89			
20.0	23.90	33.36	22.45	540	.109		98			

GULF OF GUAYAQUIL CRUISE 6111 STATION 3-1 LAT. 02 46.0 S LONG. 80 35.0 W DATE 19 DEC 1961
 TIME 1640- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY 12KT (6.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 1.2 M SEA TEMP. 24.2 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 23.9 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 737 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4 ML/L	NO2 ML/L	SIO4 ML/L
0	24.50	33.46	22.35	549			97 .16			
5.0	24.30	33.48	22.43	542			99 .06			
10.0	24.00	33.41	22.46	539			98 .09			
15.0	24.10	33.54	22.53	532			99 .07			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	PO4 ML/L	NO2 ML/L	SIO4 ML/L
0	24.50	33.46	22.35	549	0		97 .16			
2.5	24.40	33.47	22.39	546	.014		98 .11			
5.0	24.30	33.48	22.42	542	.027		99 .06			
7.5	24.15	33.44	22.44	541	.041		98 .08			
10.0	24.00	33.41	22.46	539	.054		98 .09			
15.0	24.10	33.54	22.53	532	.081		99 .07			

GULF OF GUAYAQUIL CRUISE 6111 STATION 5-1 LAT. 02 52.0 S LONG. 80 51.0 W DATE 20 DEC 1961
 TIME 0850- WEATHER 03 CLOUD COVER 9/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH .3 M SEA TEMP. 24.8 C AIR TEMP.(WET) 22.8 C AIR TEMP.(DRY) 24.4 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 739 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	25.05	33.68	22.35	549			SAT. 93			
5.0	24.65	33.65	22.45	540			ML/L 4.34			* MICROGRM-AT/L *
10.0	24.55	33.70	22.52	534			56 2.04			
							95 .22			

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* P O 4	N O 2	S I O 4
0	25.05	33.68	22.35	549	0		SAT. 93			
2.5	24.85	33.66	22.40	545	.014		ML/L 4.34			* MICROGRM-AT/L *
5.0	24.65	33.65	22.45	540	.027		75 1.18			
7.5	24.59	33.68	22.49	536	.041		56 2.04			
10.0	24.55	33.70	22.52	534	.054		76 1.13			
							95 .22			

GULF OF GUAYAQUIL CRUISE 6111 STATION 8-1 LAT. 03 08.0 S LONG. 80 43.0 W DATE 20 DEC 1961
 TIME 1025- WEATHER 02 CLOUD COVER 6/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 1.2 M SEA TEMP. 23.8 C AIR TEMP.(WET) 22.5 C AIR TEMP.(DRY) 24.7 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 738 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X ML/L	Y G E N O/00	* ML/L	P04 AQU	N02 ML/L	S104 MICROGRM-AT/L *
0	23.85	33.36	22.47	538			4.84	102	-0.09			
5.0	23.80	33.34	22.47	538			4.77	100	-0.01			
10.0	23.80	33.32	22.45	540			4.77	100	-0.01			
15.0	23.80	33.32	22.45	540			4.78	100	-0.02			
20.0	24.75	33.32	22.17	567			4.80	102	-0.12			
30.0	19.00	34.27	24.48	346			2.74	53	2.39			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X ML/L	Y G E N O/00	* ML/L	P04 AQU	N02 ML/L	S104 MICROGRM-AT/L *
0	23.85	33.36	22.47	538	0		4.84	102	-0.09			
2.5	23.82	33.35	22.47	538	.013		4.80	101	-0.05			
5.0	23.80	33.34	22.47	538	.027		4.77	100	-0.01			
7.5	23.80	33.33	22.46	539	.040		4.77	100	-0.01			
10.0	23.80	33.32	22.45	540	.054		4.77	100	-0.01			
15.0	23.80	33.32	22.45	540	.081		4.78	100	-0.02			
20.0	24.75	33.32	22.17	567	.109		4.80	102	-0.12			
25.0	21.88	33.79	23.36	453	.134		3.77	78	1.14			
30.0	19.00	34.27	24.48	346	.154		2.74	53	2.39			

GULF OF GUAYAQUIL CRUISE 6111 STATION 10-1 LAT. 03 08.0 S LONG. 80 27.0 W DATE 20 DEC 1961
 TIME 1310- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY 9KT (4.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 1.2 M SEA TEMP. 23.8 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 24.4 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 737 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * ML/L SAT. O/00	ACU ML/L	P04 NO2 SI04 * MICROGRM-AT/L *
0	24.05	33.30	22.36	548			4.65 98	.09	
5.0	24.80	33.39	22.21	563			4.72 101	-.04	
10.0	24.75	33.36	22.20	564			4.80 102	-.12	
15.0	23.75	33.34	22.48	537			4.12 87	.64	
20.0	23.65	33.41	22.56	529			4.84 102	-.07	
30.0	19.05	34.46	24.62	333			3.52 69	1.60	
50.0	15.80	34.92	25.75	225			1.60 29	3.83	
75.0	14.25	34.97	26.13	189			1.40 25	4.19	

I N T E R P O L A T E D			A N D			C O M P U T E D			V A L U E S			A T			S T A N D A R D			D E P T H S		
DEPTH	TEMP.	SAL.	SIG-T	THERMO	DYNAMIC	TOTAL	* O X	Y G E N	* AOU	P04	N02	S104								
METERS	DEG C	O/00	G/L	ANOMALY	HEIGHT	CO2	ML/L	SAT.	ML/L	* MICROGRM-AT/L										
				CL/T		MGC/M3														
0	24.05	33.30	22.36	548	0		4.65	98	.09											
2.5	24.57	33.36	22.25	559	.014		4.69	100	.02											
5.0	24.80	33.39	22.21	563	.028		4.72	101	-.04											
7.5	24.78	33.37	22.20	563	.042		4.76	102	-.08											
10.0	24.75	33.36	22.20	564	.056		4.80	102	-.12											
15.0	23.75	33.34	22.48	537	.084		4.12	87	.64											
20.0	23.65	33.41	22.56	529	.110		4.84	102	-.07											
25.0	21.35	33.93	23.61	429	.134		4.18	85	.76											
30.0	19.05	34.46	24.62	333	.153		3.52	69	1.60											
50.0	15.80	34.92	25.75	225	.210		1.60	29	3.83											
75.0	14.25	34.97	26.13	189	.262		1.40	25	4.19											

GULF OF GUAYAQUIL CRUISE 6111 STATION 11-1 LAT. 03 21.0 S LONG. 80 51.0 W DATE 20 DEC 1961
 TIME 1515- WEATHER 02 CLOUD COVER 6/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 1.7 M SEA TEMP. 24.2 C AIR TEMP.(WET) 22.5 C AIR TEMP.(DRY) 24.2 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 735 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* AUU ML/L	* P04 NO2 SI04 * MICROGRM-AT/L #
0	24.20	33.48	22.46	539			4.90	104	-0.18
5.0	23.80	33.42	22.53	533			4.77	100	-0.02
10.0	23.80	33.44	22.54	531			4.97	105	-0.22
15.0	24.80	33.42	22.23	561			4.91	105	-0.23
20.0	23.60	33.46	22.62	524			4.84	101	-0.07
30.0	20.00	34.20	24.17	376			3.82	76	1.22
50.0	15.30	34.99	25.92	210			1.03	19	4.45
INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS									

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* AUU ML/L	* P04 NO2 SI04 * MICROGRM-AT/L #
0	24.20	33.48	22.45	539	0		4.90	104	-0.18
2.5	23.92	33.44	22.50	535	.013		4.83	102	-0.10
5.0	23.80	33.42	22.53	533	.027		4.77	100	-0.02
7.5	23.80	33.43	22.54	532	.040		4.87	102	-0.12
10.0	23.80	33.44	22.54	531	.053		4.97	105	-0.22
15.0	24.80	33.42	22.23	561	.081		4.91	105	-0.23
20.0	23.60	33.46	22.62	524	.108		4.84	101	-0.07
25.0	21.80	33.83	23.41	449	.132		4.33	89	.58
30.0	20.00	34.20	24.17	376	.153		3.82	76	1.22
50.0	15.30	34.99	25.91	210	.212		1.03	19	4.45

GULF OF GUAYAQUIL CRUISE 6111 STATION 12- 1 LAT. 03 12.0 S LONG. 80 39.0 W DATE 20 DEC 1961
 TIME 1640- WEATHER 02 CLOUD COVER 6/10 WIND VELOCITY 9KT (4.5 M/SEC) WIND DIR. 225-235 T
 SECCAL DISK DEPTH 1.1 M SEA TEMP. 24.2 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 24.4 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 735 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y GEN O/00 SAT. ML/L	* AU ML/L	P04 NO2 SIO4 * MICROGRM-AT/L
0	24.20	33.37	22.37	547			4.47 95	.25	
5.0	24.00	33.49	22.52	533			4.13 87	.61	
10.0	23.90	33.39	22.48	538			4.77 100	-.02	
15.0	23.85	33.37	22.48	538			4.65 98	.10	
20.0	23.75	33.53	22.63	523			4.84 102	-.09	

INTERPOLATED		AND COMPUTED		VALUES		AT STANDARD		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y GEN O/00 SAT. ML/L	* AU ML/L	P04 NO2 SIO4 * MICROGRM-AT/L
0	24.20	33.37	22.37	547	0		4.47 95	.25	
2.5	24.10	33.43	22.45	540	.014		4.30 91	.43	
5.0	24.00	33.49	22.52	533	.027		4.13 87	.61	
7.5	23.94	33.43	22.49	536	.040		4.45 94	.29	
10.0	23.90	33.39	22.47	538	.054		4.77 100	-.02	
15.0	23.85	33.37	22.48	538	.081		4.65 98	.10	
20.0	23.75	33.53	22.62	523	.107		4.84 102	-.09	

GULF OF GUAYAQUIL CRUISE 6111 STATION 13- 1 LAT. 03 34.0 S LONG. 80 51.0 W DATE 20 DEC 1961
 TIME 1850- WEATHER 03 CLOUD COVER 7-8/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 1.0 M SEA TEMP. 24.0 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 23.9 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER 736 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 ML/L	* NO2 MICROGRM-AT/L *
0	24.20	33.65	22.58	527			4.47 95	.25	
5.0	23.80	33.60	22.66	520			4.47 94	.28	
10.0	23.75	33.49	22.60	526			4.48 94	.28	
15.0	23.80	33.58	22.65	521			4.74 100	.01	
20.0	23.75	33.68	22.74	512			4.77 100	-.02	
30.0	19.10	34.56	24.68	327			2.49 49	2.62	
50.0	15.20	35.01	25.95	206			1.09 20	4.40	
INTEGRATED AND COMPUTED VALUES AT STANDARD DEPTHS									

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 ML/L	* NO2 MICROGRM-AT/L *
0	24.20	33.65	22.58	527	0		4.47 95	.25	
2.5	24.02	33.63	22.62	524	.013		4.47 94	.26	
5.0	23.80	33.60	22.66	520	.026		4.47 94	.28	
7.5	23.78	33.53	22.62	524	.039		4.47 94	.28	
10.0	23.75	33.49	22.60	526	.052		4.48 94	.28	
15.0	23.80	33.58	22.65	521	.079		4.74 100	.01	
20.0	23.75	33.68	22.74	512	.104		4.77 100	-.02	
25.0	21.43	34.12	23.73	418	.128		3.63 75	1.30	
30.0	19.10	34.56	24.68	327	.146		2.49 49	2.62	
50.0	15.20	35.01	25.95	206	.200		1.09 20	4.40	

GULF OF GUAYAQUIL CRUISE 6111 STATION 19-1 LAT. 03 08.0 S LONG. 81 17.0 W DATE 21 DEC 1961
 TIME 0955- WEATHER 02 CLOUD COVER 7-8/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 1.9 M SEA TEMP. 23.8 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 24.2 C
 RELATIVE HUMIDITY 85 0/0 BAROMETER 736 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * ML/L SAT. O/00 AOU	P04 NC2	S104
0	23.80	33.49	22.58	528			4.25 89 .50		
5.0	23.80	33.65	22.70	516			4.54 96 .21		
10.0	23.75	33.51	22.61	525			4.19 88 .57		
15.0	23.75	33.65	22.72	515			4.37 92 .38		
20.0	23.20	33.94	23.09	478			4.15 87 .63		
30.0	19.90	34.37	24.33	361			3.70 73 1.35		
50.0	15.85	34.83	25.67	233			1.77 33 3.65		
75.0	14.00	35.09	26.27	175			.88 16 4.74		

* MICROGRM-AT/L *

I N T E R P O L A T E D		A N D		C O M P U T E D		V A L U E S		A T		S T A N D A R D		D E P T H S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N ML/L	* O/00 SAT.	* AOU ML/L	P04	NO2	SIO4	
0	23.80	33.49	22.58	528	0		4.25	89	.50				
2.5	23.80	33.51	22.59	526	.013		4.40	93	.35				
5.0	23.80	33.65	22.70	516	.026		4.54	96	.21				
7.5	23.78	33.57	22.65	521	.039		4.36	92	.39				
10.0	23.75	33.51	22.61	525	.052		4.19	88	.57				
15.0	23.75	33.65	22.72	515	.078		4.37	92	.38				
20.0	23.20	33.94	23.09	478	.103		4.15	87	.63				
25.0	21.55	34.15	23.72	418	.126		3.93	80	.99				
30.0	19.90	34.37	24.33	361	.145		3.70	73	1.35				
50.0	15.85	34.83	25.67	233	.205		1.77	33	3.65				
75.0	14.00	35.09	26.27	175	.256		.88	16	4.74				

GULF OF GUAYAQUIL CRUISE 6111 STATION 19- 2 LAT. 03 08.0 S LONG. 81 17.0 W DATE 21 DEC 1961
 TIME 0823- WEATHER 01 CLOUD COVER 4/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 1.6 M SEA TEMP. 23.9 C AIR TEMP.(WET) 21.9 C AIR TEMP.(DRY) 23.6 C
 RELATIVE HUMIDITY 86 0/0 BAROMETER 736 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AUU	P04	NO2	SI04
0	23.95	33.60	22.62	524			SAT. ML/L 95 .23			
5.0	23.95	33.60	22.62	524			92 .37			
10.0	24.10	33.70	22.65	521			98 .09			
15.0	21.40	33.99	23.64	426			84 .80			
20.0	23.95	33.67	22.67	519			98 .11			
30.0	24.05	33.68	22.65	521			94 .30			

I N T E R P U L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AUU	P04	NO2	SI04
0	23.95	33.60	22.62	524	0		SAT. ML/L 95 .23			
2.5	23.95	33.60	22.62	524	.013		94 .30			
5.0	23.95	33.60	22.62	524	.026		92 .37			
7.5	24.04	33.65	22.63	523	.039		95 .23			
10.0	24.10	33.70	22.65	521	.052		98 .09			
15.0	21.40	33.99	23.64	426	.076		84 .80			
20.0	23.95	33.67	22.67	519	.100		98 .11			
25.0	24.00	33.68	22.66	520	.126		96 .21			
30.0	24.05	33.68	22.65	521	.152		94 .30			

GULF OF GUAYAQUIL CRUISE 6111 STATION 19- 1 LAT. 03 08.0 S LONG. 81 17.0 W DATE 21 DEC 1961
 TIME 1125- WEATHER 03 CLOUD COVER 9/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH 1.7 M SEA TEMP. 23.7 C AIR TEMP.(WET) 21.7 C AIR TEMP.(DRY) 24.7 C
 RELATIVE HUMIDITY 77 0/0 BAROMETER 736 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* DO ML/L	OXYGEN O/00 SAT. ML/L	* MICROGRM-AT/L *
0	23.70	33.49	22.61	525			4.63	97	.13
5.0	23.60	33.53	22.67	519			4.59	96	.18
10.0	23.60	31.92	21.45	635			4.62	96	.20
15.0	23.65	33.49	22.62	523			4.48	94	.28
20.0	24.40 1	33.56					3.76		
30.0	19.05	34.61	24.73	322			3.52	69	1.60
50.0	16.05	35.06	25.80	221			2.82	52	2.57
75.0	13.95	35.02	26.23	180			1.49	26	4.13

I N T E R P O L A T E D			A N D			C O M P U T E D			V A L U E S			A T			S T A N D A R D			D E P T H S		
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* ML/L	O X SAT.	Y G E N O/00	* ML/L	ADU	PO4	NO2	SIO4	* MICROGRM-AT/L					
0	23.70	33.49	22.61	525	0		4.63	97		.13										
2.5	23.63	33.52	22.65	521	.013		4.61	97		.15										
5.0	23.60	33.53	22.67	519	.026		4.59	96		.18										
7.5	23.60	32.60	21.97	586	.040		4.60	96		.19										
10.0	23.60	31.92	21.45	635	.055		4.62	96		.20										
15.0	23.65	33.49	22.62	523	.084		4.48	94		.28										
20.0	24.40	34.54	23.20	468	.109		3.76	86		.72										
25.0	21.73	34.50	23.93	398	.131		3.64	77		1.16										
30.0	19.05	34.61	24.73	322	.149		3.52	69		1.60										
50.0	16.05	35.06	25.80	221	.203		2.82	52		2.57										
75.0	13.95	35.02	26.23	180	.254		1.49	26		4.13										

GULF OF GUAYAQUIL CRUISE 6111 STATION 18-1 LAT. 03 09.0 S LONG. 80 21.0 W DATE 21 DEC 1961
 TIME 1310- WEATHER 01 CLOUD COVER 1/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 24.9 C AIR TEMP.(WET) 21.9 C AIR TEMP.(DRY) 25.6 C
 RELATIVE HUMIDITY 74 0/0 BAROMETER 735 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTH S			
DEPTH METERS	TEMP. DEG C	SAL. 0/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* DO ML/L	OXYGEN 0/00 SAT.	* PO4 ML/L	NO2 ML/L	SIO4 ML/L
0	24.55	33.49	22.36	549			4.62	98	.07		
5.0	23.60	33.46	22.62	524			4.58	96	.19		
10.0	13.80	34.97	26.22	180			1.61	29	4.03		
15.0	14.45	35.07	26.16	186			1.38	25	4.19		
20.0	22.30 1	34.70					3.14				
30.0	15.90	34.63	25.50	249			3.19	59	2.24		
50.0	13.85	35.01	26.24	178			2.81	50	2.83		
75.0	16.85	35.01	25.58	242			2.53	48	2.78		
100.0	14.05	34.39	25.72	228			3.26	58	2.38		

I N T E R P O L A T E D			A N D			C O M P U T E D			V A L U E S			A T			S T A N D A R D			D E P T H S		
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* ML/L	O X SAT.	* O/00	Y G E N ML/L	* AOU	P O 4	N O 2	S I O 4						
0	24.55	33.49	22.36	549	0		4.62	98		.07										
2.5	24.17	33.47	22.46	539	.014		4.60	97		.13										
5.0	23.60	33.46	22.62	524	.027		4.58	96		.19										
7.5	18.70	34.21	24.52	343	.038		3.09	62		2.11										
10.0	13.80	34.97	26.22	180	.044		1.61	29		4.03										
15.0	14.45	35.07	26.16	186	.053		1.38	25		4.19										
20.0	15.05	34.89	25.89	212	.063		3.14	36		3.54										
25.0	15.51	34.74	25.68	232	.075		3.17	47		2.89										
30.0	15.90	34.63	25.50	249	.087		3.19	59		2.24										
50.0	13.85	35.01	26.24	178	.130		2.81	50		2.83										
75.0	16.85	35.01	25.57	242	.183		2.53	48		2.78										
100.0	14.05	34.39	25.72	228	.242		3.26	58		2.38										

GULF OF GUAYAQUIL CRUISE 6111 STATION 14- 1 LAT. 03 29.0 S LONG. 80 43.0 W DATE 21 DEC 1961
 TIME 1610- WEATHER 01 CLOUD COVER 1/10 WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 24.2 C AIR TEMP.(WET) 22.2 C AIR TEMP.(DRY) 24.4 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 733 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTH S			
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX ML/L	YGEN O/00 SAT.	* ML/L	NO2 MICROGRM-AT/L	SIO4 *
0	23.90	33.32	22.42	543			4.38	92	.37		
5.0	24.10	33.30	22.35	550			4.68	99	.05		
10.0	23.70	33.32	22.48	537			4.69	98	.08		
15.0	23.60										
20.0	18.90	34.73	24.86	310			3.50	68	1.63		
30.0	17.95	34.61	25.00	296			3.05	58	2.17		
50.0	16.75	34.92	25.53	246			2.58	48	2.75		
75.0	14.05	34.90	26.12	190			1.31	23	4.31		
100.0	13.90	35.25	26.42	162			1.31	23	4.31		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS												
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X ML/L	O/00 SAT.	* Y G E N ML/L	* P O 4 ML/L	N O 2 ML/L	S I O 4 ML/L
0	23.90	33.32	22.42	543	0		4.38	92	.37			
2.5	24.04	33.31	22.37	548	.014		4.53	96	.21			
5.0	24.10	33.30	22.35	550	.027		4.68	99	.05			
7.5	23.92	33.31	22.41	544	.041		4.69	99	.06			
10.0	23.70	33.32	22.48	537	.055		4.69	98	.08			
15.0	23.60	33.93	22.97	490	.080		4.09	83	.85			
20.0	18.90	34.73	24.86	310	.100		3.50	68	1.63			
25.0	18.38	34.66	24.94	302	.116		3.27	63	1.90			
30.0	17.95	34.61	25.00	296	.131		3.05	58	2.17			
50.0	16.75	34.92	25.53	246	.185		2.58	48	2.75			
75.0	14.05	34.90	26.12	190	.240		1.31	23	4.31			
100.0	13.90	35.25	26.42	162	.285		1.31	23	4.31			

GULF OF GUAYAQUIL CRUISE 6111 STATION 15- 1 LAT. 03 23.0 S LONG. 80 35.0 W DATE 21 DEC 1961
 TIME 1747- WEATHER 01 CLOUD COVER 1/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 265-275 T
 SECCHI DISK DEPTH 1.3 M SEA TEMP. 24.3 C AIR TEMP.(WET) 22.5 C AIR TEMP.(DRY) 24.7 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER 733 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * ML/L SAT. O/00	ADU ML/L	P04 NO2	S104 MICROGRM-AT/L *
0	24.30	33.48	22.43	542			4.76 101	-.05		
5.0	24.10	33.49	22.49	536			4.76 101	-.03		
10.0	23.75	33.51	22.61	525			4.77 100	-.01		
15.0	23.75	33.36	22.50	536			4.81 101	-.05		
20.0	20.40	34.25	24.10	382			3.95 79	1.06		
30.0	18.20	34.56	24.91	306			3.04 58	2.16		
50.0	15.65	34.89	25.76	224			2.29 42	3.15		
75.0	14.05	35.11	26.28	175			1.00 18	4.61		

I N T E R P O L A T E D		A N D		C O M P U T E D		V A L U E S		A T		S T A N D A R D		D E P T H S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* ML/L	O X ML/L	Y G E N O/00 SAT.	* ML/L	P04	NO2	SI04
0	24.30	33.48	22.43	542	0		4.76	101	-0.05				
2.5	24.20	33.49	22.46	539	.014		4.76	101	-0.04				
5.0	24.10	33.49	22.49	536	.027		4.76	101	-0.03				
7.5	23.94	33.50	22.55	531	.040		4.77	100	-0.02				
10.0	23.75	33.51	22.61	525	.054		4.77	100	-0.01				
15.0	23.75	33.36	22.50	536	.080		4.81	101	-0.05				
20.0	20.40	34.25	24.10	382	.103		3.95	79	1.06				
25.0	19.19	34.41	24.54	340	.121		3.49	69	1.61				
30.0	18.20	34.56	24.91	306	.137		3.04	58	2.16				
50.0	15.65	34.89	25.76	224	.191		2.29	42	3.15				
75.0	14.05	35.11	26.28	175	.241		1.00	18	4.61				

GULF OF GUAYAQUIL CRUISE 6205 STATION 1-1 LAT. 02 36.0 S LONG. 80 51.0 W DATE 27 FEB 1962
 TIME 0902- WEATHER CLOUD C VER 2-3/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH 2.5 M SEA TEMP. 26.6 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 757 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* OX ML/L	* OX O/00	* Y SAT.	* AOU ML/L	PO4	NO2	SIO4
0	26.69	31.36	20.10	765	7.08	MGC/M3	3.86	84	.74				
2.0	26.39	31.56	20.35	742	7.99	26292	4.04	88	.58				
4.0	26.06	31.67	20.53	724	8.01	23310	3.85	83	.79				
6.0	25.74	32.18	21.01	678	8.01	23293	3.65	79	1.00				
8.0		34.33			7.75	23640	1.52						

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* OX ML/L	* OX O/00	* Y SAT.	* AOU ML/L	PO4	NO2	SIO4
0	26.69	31.36	20.10	765	0	MGC/M3	3.86	84	.74				
2.5	26.31	31.58	20.39	738	.019	26292	3.99	86	.63				
5.0	25.89	31.95	20.79	699	.037	23305	3.75	81	.89				
						23467							

GULF OF GUAYAQUIL CRUISE 6205 STATION 2-1 LAT. 02 41.0 S LONG. 80 43.0 W DATE 27 FEB 1962
 TIME 1113- WEATHER CLOUD COVER 2-3/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH 3.0 M SEA TEMP. 27.0 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 757 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO CL/T	PH	TOTAL CO2	MGC/M3	* OX ML/L	* OX O/00	* YGEN SAT.	* AOU ML/L	* PO4	NO2	SIO4
0	26.48	31.33	20.15	761	8.08	22676		4.70	102	-08				
2.0	26.11	31.53	20.41	735	8.05	22986		4.44	96	.20				
4.0	25.99	32.70	21.33	648	8.09	23500		4.50	98	.11				
6.0	24.61	33.06	22.02	581	8.02	24212		3.89	83	.81				
8.0		34.42			7.77			1.26						

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO A OMLY L/T	DYNAMIC HEIGHT	TOTAL CO2	MGC/M3	* OX ML/L	* OX O/00	* YGEN SAT.	* AOU ML/L	* PO4	NO2	SIO4
0	26.48	31.33	20.15	761	0	22676		4.70	102	-08				
2.5	26.08	31.65	20.51	726	.019	23115		4.45	96	.18				
5.0	25.30	32.88	21.67	614	.035	23856		4.19	90	.46				

GULF OF GUAYAQUIL CRUISE 6205 STATION 3-1 LAT. 02 46.0 S LONG. 80 35.0 W DATE 27 FEB 1962
 TIME 1317- WEATHER CLOUD COVER 6/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH 2.5 M SEA TEMP. 27.3 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 756 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY L/T	PH	TOTAL CO2	MGC/M3	* OX ML/L	* OX O/00	* YGE SAT.	* AOU ML/L	* PO4	NO2	SI04
0	26.81	30.79	19.64	810	8.14	21992	5.26	114	-0.65					
2.0	26.45	31.36	20.18	758	8.13	22418	5.11	111	-0.49					
4.0	26.55	32.86	21.27	653	8.14	23260	4.79	105	-0.22					
6.0	26.39	33.22	21.59	622	8.12	23612	4.62	101	-0.05					
8.0		33.68			8.01			3.31						

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	MGC/M3	* OX ML/L	* OX O/00	* YGE SAT.	* AOU ML/L	* PO4	NO2	SI04
0	26.81	30.79	19.64	810	0	21992	5.26	114	-0.65					
2.5	26.48	31.81	20.51	726	.019	22628	5.03	109	-0.42					
5.0	26.46	33.05	21.45	636	.036	23436	4.70	103	-0.14					

GULF OF GUAYAQUIL CRUISE 6205 STATION 4-1 LAT. 02 52.0 S LONG. 80 27.0 W DATE 27 FEB 1962
 TIME 1556- WEATHER CLOUD COVER 9/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH M SEA TEMP. 26.5 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 755 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* OX Y GEN O/00	* PO4	NO2
0	26.50	32.18	20.78	700	8.19	MGC/M3 22551	ML/L 5.36 SAT. 117	ML/L -0.77	* MICROGRM-AT/L *
2.0	26.00	32.25	20.99	680	8.17	22747	4.97 107	-0.35	
4.0	25.87	32.27	21.04	675	8.16	22827	4.90 106	-0.27	
6.0	25.76	32.74	21.43	638	8.13	23299	4.51 97	.12	
8.0		33.08			8.11		5.05		

INTERPULATED		AND COMPUTED		VALUES		AT STANDARD		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* OX Y GEN O/00	* PO4	NO2
0	26.50	32.18	20.78	700	0	MGC/M3 22551	ML/L 5.36 SAT. 117	ML/L -0.77	* MICROGRM-AT/L *
2.5	25.96	32.26	21.00	679	.017	22767	4.95 107	-0.33	
5.0	25.81	32.52	21.25	655	.034	23063	4.70 102	-0.07	

GULF OF GUAYAQUIL CRUISE 6205 STATION 5-1 LAT. 02 52.0 S LONG. 80 51.0 W DATE 27 FEB 1962
 TIME 1845- WEATHER CLOUD COVER 10/10 WIND VELOCITY KT (M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH M SEA TEMP. 26.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 755 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN * O/00 SAT. ML/L	P04 * MICROGRM-AT/L	NO2 * SI04
0	26.28	31.31	20.19	756	8.11	22509	5.30 114	-.67	
2.0	26.42	31.65	20.40	736	8.11	22711	5.26 114	-.65	
4.0	25.90	32.61	21.29	651	8.08	23509	4.52 98	.10	
6.0	25.79	32.63	21.34	647	8.08	23528	4.31 93	.32	
8.0		33.10			8.04		4.03		

INTERPOLATED		AND COMPUTED		VALUES		AT STANDARD		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY L/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* U X Y GEN * O/00 SAT. ML/L	P04 * MICROGRM-AT/L	NO2 * SI04
0	26.28	31.31	20.19	756	0	22509	5.30 114	-.67	
2.5	26.30	31.79	20.55	722	.018	22910	5.07 110	-.46	
5.0	25.84	32.62	21.31	649	.036	23518	4.42 95	.21	

GULF OF GUAYAQUIL CRUISE 6205 STATION 6-1 LAT. 02 56.0 S LONG. 80 39.0 W DATE 27 FEB 1962
 TIME 2001- WEATHER CLOUD COVER WIND VELOCITY 9KT (4.5 M/SEC) WIND DIR. 215-225 T
 SECCHI DISK DEPTH M SEA TEMP. 26.6 C AIR TEMP. (WET) C AIR TEMP. (DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 755 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS													
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO L/T	PH	TOTAL CO2	* OX Y GEN O/00	* SAT.	* ML/L	* AOU	P04	N02	SIO4
0	26.79	31.49	20.17	759	8.11	MGC/M3	ML/L	112	ML/L	ML/L			
						22591	5.14	112	5.14	-0.55			
2.0	26.54	31.82	20.49	727	8.12	22751	5.00	109	5.00	-0.40			
4.0	26.05	32.52	21.17	662	8.02	23787	4.61	100	4.61	0.00			
6.0	26.33	32.30	20.92	686	8.13	22997	4.79	104	4.79	-0.19			
8.0		33.95			8.01		2.91						

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS													
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO CL/T	DYNAMIC HEIGHT	TOTAL CO2	* OX Y GEN O/00	* SAT.	* ML/L	* AOU	P04	N02	SIO4
0	26.79	31.49	20.17	759	0	MGC/M3	ML/L	112	ML/L	ML/L			
						22591	5.14	112	5.14	-0.55			
2.5	26.42	31.95	20.63	714	.018	23010	4.90	107	4.90	-0.30			
5.0	26.20	32.40	21.04	675	.036	23392	4.70	102	4.70	-0.09			

GULF OF GUAYAQUIL CRUISE 6205 STATION 7-1 LAT. 03 08.0 S LONG. 80 51.0 W DATE 27 FEB 1962
 TIME 2140- WEATHER CLOUD COVER WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 8.0 M SE TEMP. 26.4 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 756 MM

U B S E R V E D		A N D C O M P U T E D		V A L U E S		A T U R S E R V E D		D E P T H S	
DEPTH METERS	TEMP. DEG C	SAL. U/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* AOU ML/L	NO2 SIO4
0	26.80	31.64	20.28	748	8.12	22625	116	-0.72	
2.0	26.68	31.47	20.19	757	8.11	22585	107	-0.31	
4.0	26.35	32.20	20.84	694	8.09	23170	95	.21	
6.0	26.56	33.46	21.72	610	8.16	23489	100	-0.01	
8.0		34.51			7.76				

I N T E R P O L A T E D		A N D C O M P U T E D		V A L U E S		A T S T A N D A R D		D E P T H S	
DEPTH METERS	TEMP. DEG C	SAL. U/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* AOU ML/L	NO2 SIO4
0	26.80	31.64	20.28	748	0	22625	116	-0.72	
2.5	26.60	31.61	20.32	744	.019	22731	104	-0.18	
5.0	26.46	32.88	21.32	649	.036	23329	98	.10	

GULF OF GUAYAQUIL CRUISE 6205 STATION 8-1 LAT. 03 08.0 S LONG. 80 43.0 W DATE 27 FEB 1962
 TIME 2333- WEATHER CLOUD COVER WIND VELOCITY 14KT (7.0 M/SEC) WIND DIR. 215-225 T
 SECCHI DISK DEPTH M SEA TEMP. 26.4 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 744 MM

JOBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* O X Y G E N * O/00 SAT. ML/L	PO4	NO2	SIO4
0	26.78	31.83	20.43	734	8.12	MGC/M3 22743	4.84 106 -.26			
2.0	26.75	31.83	20.44	733	8.12	22745	4.88 106 -.30			
4.0	26.33	32.66	21.19	661	8.12	23276	4.57 100 .02			
6.0	23.88	33.73	22.74	512	8.03	24623	3.27 69 1.47			
8.0		34.27			7.81		1.29			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY L/T	DYNAMIC HEIGHT	TOTAL CO2	* O X Y G E N * O/00 SAT. ML/L	PO4	NO2	SIO4
0	26.78	31.83	20.43	734	0	MGC/M3 22743	4.84 106 -.26			
2.5	26.66	32.04	20.62	715	.018	22877	4.80 105 -.22			
5.0	25.11	33.19	21.97	586	.034	23950	3.92 84 .74			

GULF OF GUAYAQUIL CRUISE 6205 STATION 9-1 LAT. 03 08.0 S LONG. 80 35.0 W DATE 27 FEB 1962
 TIME 0230- WEATHER CLOUD COVER WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH M SEA TEMP. 25.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER MM

OBSERVED		AND COMPUTED		VALUES AT OBSERVED		DEPTH S				
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY L/T	PH	TOTAL CO2 MGC/M3	* OXYGEN O/00 SAT. ML/L	* P04 MICROGRM-AT/L	NO2	SI04
0	26.15	31.83	20.62	715	8.08	23008	4.24 92	.39		
2.0	26.03	32.14	20.89	689	8.08	23208	4.24 92	.39		
4.0	25.69	32.74	21.45	636	8.07	23660	3.95 85	.68		
6.0	25.12	33.08	21.88	595	8.03	24140	3.29 71	1.37		
8.0		32.94			8.07		3.74			

INTERPOLATED		AND COMPUTED		VALUES AT STANDARD		DEPTH S				
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OXYGEN O/00 SAT. ML/L	* P04 MICROGRM-AT/L	NO2	SI04
0	26.15	31.83	20.62	715	0	23008	4.24 92	.39		
2.5	25.95	32.21	20.97	681	.017	23321	4.17 90	.46		
5.0	25.40	32.91	21.66	615	.034	23900	3.62 78	1.03		

GULF OF GUAYAQUIL CRUISE 6205 STATION 10-1 LAT. 03 08.0 S LONG. 80 27.0 W DATE 27 FEB 1962
 TIME 0600- WEATHER CLOUD COVER 10/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 215-225 T
 SECCHI DISK DEPTH M SEA TEMP. 25.6 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 757 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* O X Y G E N O/00	* PO4	N02 SIO4
0	26.02	31.85	20.68	710	8.06	MGC/M3 23139	ML/L 4.66 SAT. 101	ML/L -0.02	* MICROGRM-AT/L *
2.0	26.04	32.00	20.79	699	8.11	22949	4.67 101	-0.04	
4.0	26.02	32.05	20.8	695	8.11	22981	99	.05	
6.0	25.97	32.38	21.0	670	8.12	23127	99	.06	
8.0		32.70			8.10		4.11		

INTERPOLATED		AND COMPUTED		VALUES		AT STANDARD		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* O X Y G E N O/00	* PO4	N02 SIO4
0	26.02	31.85	20.68	710	0	MGC/M3 23139	ML/L 4.66 SAT. 101	ML/L -0.02	* MICROGRM-AT/L *
2.5	26.04	32.01	20.79	699	.018	22957	100	-0.02	
5.0	25.99	32.21	20.96	683	.035	23054	99	.06	

GULF OF GUAYAQUIL CRUISE 6205 STATION 11-1 LAT. 03 21.0 S LONG. 80 51.0 W DATE 27 FEB 1962
 TIME 0814- WEATHER CLOUD COVER 9/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 26.0 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 758 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	MGC/M3	* OX ML/L	YGEN O/00	* SAT.	PO4 ML/L	NO2 ML/L	SIO4 ML/L
0	26.21	31.27	20.18	757	8.03	22921	22921	4.48	97	97	.16		
2.0	26.00	31.87	20.70	708	8.03	23318	23318	4.60	99	99	.04		
4.0	25.95	32.27	21.02	677	8.13	23002	23002	4.61	100	100	.02		
6.0	25.84	32.32	21.09	671	8.12	23098	23098	4.41	95	95	.22		
8.0		33.46			7.95			2.16					

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY L/T	DYNAMIC HEIGHT	TOTAL CO2	MGC/M3	* OX ML/L	YGEN O/00	* SAT.	PO4 ML/L	NO2 ML/L	SIO4 ML/L
0	26.21	31.27	20.18	757	0	22921	22921	4.48	97	97	.16		
2.5	25.98	31.99	20.79	699	.018	23239	23239	4.60	99	99	.03		
5.0	25.89	32.30	21.05	674	.035	23050	23050	4.51	97	97	.12		

GULF OF GUAYAQUIL CRUISE 6205 STATION 12-1 LAT. 03 12.0 S LONG. 80 39.0 W DATE 27 FEB 1962
 TIME 1012- WEATHER CLOUD COVER 7-8/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 26.5 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 758 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY L/T	PH	TOTAL CO2	MGC/M3	* OX ML/L	* OX SAT.	* OX O/00	* AOU ML/L	P04	NO2	SI04
0	26.47	31.35	20.16	759	8.12	22467	22467	4.78	104	97	-.16			
2.0	26.20	31.71	20.52	725	8.11	22761	22761	4.49	97	97	.14			
4.0	25.89	32.38	21.12	668	8.11	23191	23191	4.49	97	97	.14			
6.0	25.77	32.41	21.18	662	8.09	23334	23334	4.20	91	91	.44			
8.0		34.34			7.78			.85						

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	MGC/M3	* OX ML/L	* OX SAT.	* OX O/00	* AOU ML/L	P04	NO2	SI04
0	26.47	31.35	20.16	759	0	22467	22467	4.78	104	97	-.16			
2.5	26.12	31.84	20.64	713	.018	22868	22868	4.49	97	97	.14			
5.0	25.82	32.40	21.15	665	.036	23262	23262	4.34	94	94	.29			

GULF OF GUAYAQUIL CRUISE 6205 STATION 13-1 LAT. 03 34.0 S LONG. 80 51.0 W DATE 27 FEB 1962
 TIME 1210- WEATHER CLOUD COVER 5/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH 1.8 M SE TEMP. 27.6 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 759 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	MGC/M3	* OX ML/L	* OX O/00	* YG SAT.	* AOU ML/L	P04	NO2	SI04
0	27.15	31.35	19.95	780	8.14	22313	22313	4.99	109	109	-.42			
2.0	26.52	31.55	20.30	746	8.15	22414	22414	4.98	108	108	-.37			
4.0	25.94	32.07	20.87	691	8.12	22939	22939	4.78	103	103	-.15			
6.0	25.84	32.54	21.25	655	8.12	23232	23232	4.59	99	99	.04			
8.0		34.27			7.81			1.09						

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	MGC/M3	* OX ML/L	* OX O/00	* YG SAT.	* AOU ML/L	P04	NO2	SI04
0	27.15	31.35	19.95	780	0	22313	22313	4.99	109	109	-.42			
2.5	26.34	31.71	20.47	730	.019	22546	22546	4.93	107	107	-.32			
5.0	25.89	32.32	21.08	672	.036	23086	23086	4.68	101	101	-.05			

GULF OF GUAYAQUIL CRUISE 6205 STATION 14-1 LAT. 03 29.0 S LONG. 80 43.0 W DATE 27 FEB 1962
 TIME 1413- WEATHER CLOUD COVER 4/10 WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 27.2 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 756 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* O X Y G E N * O/00	PO4	NO2
0	27.25	31.35	19.92	783	8.18	MGC/M3 22075	ML/L 5.14	SAT. 113	* MICROGRM-AT/L *
2.0	27.27	31.31	19.88	786	8.17	22108	5.27	116	-0.58
4.0	26.15	32.45	21.09	670	8.17	22856	4.67	101	-0.71
6.0	26.07	32.57	21.20	659	8.17	22932	4.20	91	-0.06
8.0		32.75			8.11		4.45		.41

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY L/T	DYNAMIC HEIGHT	TOTAL CO2	* O X Y G E N * O/00	PO4	NO2
0	27.25	31.35	19.92	783	0	MGC/M3 22075	ML/L 5.14	SAT. 113	* MICROGRM-AT/L *
2.5	27.01	31.52	20.12	763	.019	22295	5.12	112	-0.58
5.0	26.11	32.51	21.15	664	.037	22894	4.43	96	-0.55
									.17

GULF OF GUAYAQUIL CRUISE 6205 STATION 15- 1 LAT. 03 23.0 S LONG. 80 35.0 W DATE 27 FEB 1962
 TIME 1610- WEATHER CLOUD COVER 2-3/10 WIND VELOCITY 13KT (6.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH 2.0 M SEA TEMP. 27.0 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 755 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY L/T	PH	TOTAL CO2	MGC/M3	* O X Y G E N O/00	* SAT. ML/L	* AOU ML/L	P04	NO2	SI04
0	26.66	31.65	20.33	743	8.18	22289	22289	119	119	-.89			
2.0	26.41	31.85	20.56	721	8.18	22423	22423	110	110	-.45			
4.0	26.20	32.18	20.87	691	8.15	22813	22813	103	103	-.15			
6.0	26.00	32.38	21.08	671	8.15	22946	22946	99	99	.05			
8.0		32.56			8.12								

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	MGC/M3	* O X Y G E N O/00	* SAT. ML/L	* AOU ML/L	P04	NO2	SI04
0	26.66	31.65	20.33	743	0	22289	22289	119	119	-.89			
2.5	26.35	31.95	20.65	712	.018	22521	22521	108	108	-.38			
5.0	26.09	32.29	20.98	680	.036	22879	22879	101	101	-.05			

GULF OF GUAYAQUIL CRUISE 6205 STATION 16-1 LAT. 03 18.0 S LONG. 80 27.0 W DATE 27 FEB 1962
 TIME 1847- WEATHER CLOUD COVER WIND VELOCITY 9KT (4.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH M SE TEMP. 27.2 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 755 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* OX Y GEN * O/00	* PO4	NO2	SI04
0	27.38	31.13	19.71	803	8.21	MGC/M3	ML/L SAT. ML/L	* MICROGRM-AT/L *		
2.0	27.24	31.35	19.92	782	8.21	21760	5.83 128 -1.27			
4.0	26.52	32.21	20.79	699	8.16	21898	5.92 130 -1.36			
6.0	26.12	32.36	21.03	676	8.11	22751	5.27 115 -.68			
8.0		32.29			8.11	23165	4.64 101 -.03			
							4.56			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* OX Y GEN * O/00	* PO4	NO2	SI04
0	27.38	31.13	19.71	803	0	MGC/M3	ML/L SAT. ML/L	* MICROGRM-AT/L *		
2.5	27.07	31.47	20.07	768	.020	21760	5.83 128 -1.27			
5.0	26.30	32.29	20.92	686	.038	22111	5.76 126 -1.19			
						22958	4.95 108 -.35			

GULF OF GUAYAQUIL CRUISE 6205 STATION 17- 1 LAT. 03 15.0 S LONG. 80 21.0 W DATE 27 FEB 1962
 TIME 2007- WEATHER CLOUD COVER WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH M SEA TEMP. 26.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 756 MM

U R S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO CL/T	PH	TOTAL CO2	* O X Y G E N * O/00	PO4	NO2	SI04
0	27.28	31.11	19.73	801	8.19	MGC/M3	ML/L	SAT. ML/L	* MICROGRM-AT/L	#
2.0	26.98	31.49	20.11	764	8.18	21872	5.73	125 -1.16		
4.0	26.25	32.23	20.89	689	8.12	22175	5.55	121 -.97		
6.0	26.02	32.52	21.18	661	8.11	23019	4.89	106 -.28		
8.0		34.33			7.78	23269	4.50	98 .11		
										.77

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO L/T	DYNAMIC HEIGHT	TOTAL CO2	* O X Y G E N * O/00	PO4	NO2	SI04
0	27.28	31.11	19.73	801	0	MGC/M3	ML/L	SAT. ML/L	* MICROGRM-AT/L	#
2.5	26.81	31.63	20.26	749	.019	21872	5.73	125 -1.16		
5.0	26.13	32.39	21.05	674	.037	22386	5.39	117 -.80		
						23144	4.69	102 -.08		

GULF OF GUAYAQUIL CRUISE 6205 STATION 18-1 LAT. 03 09.0 S LONG. 80 21.0 W DATE 27 FEB 1962
 TIME 2107- WEATHER CLOUD COVER WIND VELOCITY 11KT (5.5 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH M SEA TEMP. 26.8 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 756 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2	* OX Y GEN O/00	* PO4	NO2	SIO4
0	27.13	31.18	19.83	791	8.18	MGC/M3	ML/L SAT. ML/L	* MICROGRM-AT/L *		
2.0	27.00	31.33	19.98	777	8.17	21981	5.46 119	ADU		
4.0	26.28	31.71	20.4	728	8.09	22137	5.17 113			
6.0	25.03	32.74	21.65	617	7.92	22869	4.83 105			
8.0		34.54			7.66	24526	3.66 78			
										1.02
										.35

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2	* OX Y GEN O/00	* PO4	NO2	SIO4
0	27.13	31.18	19.83	791	0	MGC/M3	ML/L SAT. ML/L	* MICROGRM-AT/L *		
2.5	26.85	31.35	20.04	771	.020	21981	5.46 119	ADU		
5.0	25.66	32.22	21.07	672	.038	22320	5.08 111			
						23697	4.24 91			
										.41

GULF OF GUAYAQUIL CRUISE 6220 STATION 3-1 LAT. 02 46.0 S LONG. 80 35.0 W DATE 11 JUL 1962
 TIME 0620- WEATHER CLOUD COVER WIND VELOCITY 13KT (6.5 M/SEC) WIND DIR. 225-235 T
 SPECCHI DISK DEPTH M SEA TEMP. 22.6 C AIR TEMP. (WET) C AIR TEMP. (DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* ML/L	SAT. ML/L	AQU ML/L	PC4	NO2	SIO4
0	23.00	33.88	23.11	477				4.92	102	-0.12			
2.5	22.96	33.80	23.06	482				5.06	105	-0.25			* MICROGRM-AT/L *
5.0	23.01	33.71	22.98	490				5.05	105	-0.24			.34
10.0	23.02	33.69	22.96	491				5.03	105	-0.22			.35
15.0	22.69	34.33	23.54	436									

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* ML/L	SAT. ML/L	AQU ML/L	PC4	NO2	SIO4
0	23.00	33.88	23.11	477	0			4.92	102	-0.12			
2.5	22.96	33.80	23.06	482	.012			5.06	105	-0.25			* MICROGRM-AT/L *
5.0	23.01	33.71	22.97	490	.024			5.05	105	-0.24			2.83
7.5	23.02	33.70	22.96	491	.036			5.04	105	-0.23			1.58
10.0	23.02	33.69	22.96	491	.049			5.03	105	-0.22			.34
15.0	22.69	34.33	23.53	436	.072								.34

GULF OF GUAYAQUIL CRUISE 6220 STATION 4-1 LAT. 02 52.0 S LONG. 80 27.0 W DATE 11 JUL 1962
 TIME 0805-- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 10KT (5.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 1.6 M SEA TEMP. 22.7 C AIR TEMP. (WET) C AIR TEMP. (DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00	* ML/L	* SAT.	* ML/L	* AOU	P04	NO2	SI04
0	22.72	33.58	22.96	491				5.06	105	-0.23				
2.5	22.82	33.60	22.95	493				5.06	105	-0.23				
5.0	22.97	33.82	23.07	481				4.98	104	-0.17				
7.5	22.98	33.77	23.03	485				5.00	104	-0.19				
10.0	22.93	33.78	23.05	483										.47

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00	* ML/L	* SAT.	* ML/L	* AOU	P04	NO2	SI04
0	22.72	33.58	22.96	491	0			5.06	105	-0.23				
2.5	22.82	33.60	22.95	493	.012			5.06	105	-0.23				
5.0	22.97	33.82	23.07	481	.024			4.98	104	-0.17				
7.5	22.98	33.77	23.03	485	.037			5.00	104	-0.19				
10.0	22.93	33.78	23.05	483	.049									.47

GULF OF GUAYAGUIL CRUISE 6220 STATION 6-1 LAT. 02 56.0 S LONG. 80 39.0 W DATE 11 JUL 1962
 TIME 1008- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 275-285 T
 SECCHI DISK DEPTH 1.6 M SEA TEMP. 23.2 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM

U B S E R V E D		A N D C O M P U T E D		V A L U E S		A T O B S E R V E D		D E P T H S	
DEPTH METERS	TEMP. DEG C	SAL. 0/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N 0/00 SAT. ML/L	* P O 4 ACU ML/L	* N O 2 MICROGRM-AT/L
0	23.27						5.06		.33
5.0	23.16						5.01		
10.0	23.26						5.02		.29
15.0	23.24						4.95		
20.0	23.17						3.10		
25.0	23.05						4.92		1.08

I N T E R P U L A T E D		A N D C O M P U T E D		V A L U E S		A T S T A N D A R D		D E P T H S	
DEPTH METERS	TEMP. DEG C	SAL. 0/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N 0/00 SAT. ML/L	* P O 4 ACU ML/L	* N O 2 MICROGRM-AT/L
0							5.06		.33
2.5							5.04		.32
5.0							5.01		.31
7.5							5.02		.30
10.0							5.02		.29
15.0							4.95		.55
20.0							3.10		.81
25.0							4.92		1.08

GULF OF GUAYAQUIL CRUISE 6220 STATION 8-1 LAT. 03 08.0 S LONG. 80 43.0 W DATE 11 JUL 1962
 TIME 1200-1209 WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 23.2 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AOU ML/L SAT. ML/L	P04 * MICROGRM-AT/L *	NO2 SI04
0	23.19						5.06	.33	
5.0	23.11						3.15		
10.0	23.14						5.05	.32	
15.0	23.09						5.05		
20.0	23.02						5.06	.36	
30.0	22.99						5.00		
40.0							4.98		

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 AOU ML/L SAT. ML/L	P04 * MICROGRM-AT/L *	NO2 SI04
0							5.06	.33	
2.5							4.10	.33	
5.0							3.15	.33	
7.5							4.10	.32	
10.0							5.05	.32	
15.0							5.05	.34	
20.0							5.06	.36	
25.0							5.03		
30.0							5.00		

GULF OF GUAYAQUIL CRUISE 6220 STATION 1-2 LAT. 02 36.0 S LONG. 80 51.0 W DATE 11 JUL 1962
 TIME 1354-1408 WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 285-295 T
 SECCHI DISK DEPTH 1.3 M SEA TEMP. 23.1 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTHS	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OXYGEN O/00 SAT. ML/L	* PO4	NO2 SI04
0	23.07						5.18		.38
5.0	22.92						5.18		
10.0	22.94						5.20		.35
20.0	22.90						5.18		
30.0	22.86						5.05		.37
40.0	22.72						4.74		
50.0	18.13						2.19		1.72
INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OXYGEN O/00 SAT. ML/L	* PO4	NO2 SI04
0							5.18		.38
2.5							5.18		.37
5.0							5.18		.36
7.5							5.19		.36
10.0							5.20		.35
15.0							5.19		.35
20.0							5.18		.36
25.0							5.11		.36
30.0							5.05		.37
50.0							2.19		1.72

GULF OF GUAYAQUIL CRUISE 6307 STATION I-1 LAT. 02 53.2 S LONG. 79 55.2 W DATE 7 MAR 1963
 TIME 1009- WEATHER 03 CLOUD COVER 6/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 30.4 C AIR TEMP.(WET) C AIR TEMP.(DRY) C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N ML/L SAT. O/00	* AOU ML/L	P04	NO2	SI04
0	29.58	32.10	19.72	802			2.75	63	1.63	1.17	2.1
1.0	29.43	32.14	19.80	794			2.73	62	1.66		
2.0	29.37	32.16	19.83	791			2.75	63	1.64	1.02	2.2
3.0	29.21	32.18	19.90	784			2.62	60	1.78		
4.5	29.08	32.23	19.98	777			2.50	57	1.91	1.42	2.5

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N ML/L SAT. O/00	* AOU ML/L	P04	NO2	SI04
0	29.58	32.10	19.72	802	0		2.75	63	1.63	1.17	2.1
2.5	29.29	32.17	19.87	788	.020		2.68	61	1.71	1.10	2.3

GULF OF GUAYAQUIL CRUISE 6307 STATION I-2 LAT. 02 53.2 S LONG. 79 55.2 W DATE 7 MAR 1963
 TIME 1318-1323 WEATHER 02 CLOUD COVER 6/10 WIND VELOCITY KT (M/SEC) WIND DIR. -
 SECCHI DISK DEPTH M SEA TEMP. 30.1 C AIR TEMP. (WET) 30.1 C AIR TEMP. (DRY) 25.6 C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTHS	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 ML/L	SIG4
0	30.07	31.96	19.45	828			3.49 80	.86	3.4
1.5	29.02	31.85	19.72	802			3.01 68	1.41	
3.0	28.88	31.85	19.76	798			2.91 66	1.52	3.5
4.5	28.80	31.83	19.78	796			2.92 66	1.52	
6.0	28.77	31.87	19.82	793			2.90 65	1.54	3.5

INTERPOLATED		AND COMPUTED		VALUES		AT STANDARD		DEPTHS	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 ML/L	SIG4
0	30.07	31.96	19.45	828	0		3.49 80	.86	3.4
2.5	28.92	31.85	19.75	799	.020		2.94 66	1.49	3.5
5.0	28.79	31.84	19.79	795	.040		2.91 66	1.53	3.5

GULF OF GUAYAQUIL CRUISE 6307 STATION I-3 LAT. 02 53.2 S LONG. 79 55.2 W DATE 7 MAR 1963
 TIME 1415- WEATHER 02 CLOUD COVER 6/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 30.1 C AIR TEMP.(WET) 30.1 C AIR TEMP.(DRY) 25.6 C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT.	* ML/L	* ML/L	AQU	P04	NO2	SI04
0	29.24	31.46	19.35	837			80	3.52		.90	1.18	2.1	
1.0	28.74	31.46	19.52	821			77	3.43		1.02			
3.0	28.77	31.47	19.52	821			73	3.26		1.19	1.33	2.3	
5.0	28.76	31.47	19.52	821			72	3.20		1.25			
7.0	28.69	31.64	19.67	807			71	3.17		1.28	1.05	1.9	

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT.	* ML/L	* ML/L	AQU	P04	NO2	SI04
0	29.24	31.46	19.35	837	0		80	3.52		.90	1.18	2.1	
2.5	28.76	31.47	19.52	821	.021		74	3.30		1.15	1.30	2.3	
5.0	28.76	31.47	19.52	821	.041		72	3.20		1.25	1.19	2.1	

GULF OF GUAYAQUIL CRUISE 6307 STATION I-4 LAT. 02 53.2 S LONG. 79 55.2 W DATE 7 MAR 1963
 TIME 1523- WEATHER 02 CLOUD COVER 6/10 WIND VELOCITY KT (M/SEC) WIND DIR. - -
 SECCHI DISK DEPTH .8 M SEA TEMP. 30.1 C AIR TEMP.(WET) 30.1 C AIR TEMP.(DRY) 25.6 C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT.	* ML/L	* ML/L	PO4	NO2	SI04
0	28.51	31.83	19.87	787			86	.64	.85		.7	
1.5	28.47	31.80	19.86	788			86	.64				
3.0	28.40	31.82	19.90	785			86	.65	1.07	.6		
4.5	28.40	31.82	19.90	785			85	.66	.87	.7		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT.	* ML/L	PO4	NO2	SI04
0	28.51	31.83	19.87	787	0		86	.64	.85	.7	
2.5	28.42	31.81	19.89	786	.020		86	.65	1.04	.6	

GULF OF GUAYAQUIL CRUISE 6307 STATION I- 5 LAT. 02 53.2 S LONG. 79 55.2 W DATE 7 MAR 1963
 TIME 1600- WEATHER 02 CLOUD COVER 6/10 WIND VELOCITY KT (M/SEC) WIND DIR. - T
 SECCHI DISK DEPTH M SEA TEMP. 30.1 C AIR TEMP.(WET) 30.1 C AIR TEMP.(DRY) 25.6 C
 RELATIVE HUMIDITY 0/0 BAROMETER 760 MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* SAT.	ML/L	* AOU	PO4	NO2	SI04
0	28.37	31.65	19.78	796				97	.12		.93	.6	
2.5	28.04	31.91	20.08	767				90	.45				
5.0	27.97	32.01	20.18	757				88	.56		.79	.5	
10.0	27.31	32.03	20.41	736				87	.60				
15.0	27.89	32.01	20.21	755				85	.67		.95	.4	

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	* SAT.	ML/L	* AOU	PO4	NO2	SI04
0	28.37	31.65	19.78	796	0			97	.12		.93	.6	
2.5	28.04	31.91	20.08	767	.020			90	.45		.86	.5	
5.0	27.97	32.01	20.18	757	.039			88	.56		.79	.5	
7.5	27.64	32.02	20.30	746	.057			87	.58		.83	.5	
10.0	27.31	32.03	20.41	736	.076			87	.60		.87	.5	
15.0	27.89	32.01	20.21	755	.113			85	.67		.95	.4	

GULF OF GUAYAQUIL CRUISE 6414 STATION V-1 LAT. 02 34.0 S LONG. 80 06.5 W DATE 29 JUL 1964
 TIME 0652- WEATHER 01 CLOUD COVER 10/10 WIND VELOCITY 6KT (3.0 M/SEC) WIND DIR. 215-225 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 23.7 C AIR TEMP.(WET) 19.2 C AIR TEMP.(DRY) 20.7 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER MM

OBSERVED		AND COMPUTED		VALUES		AT OBSERVED		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 ADU ML/L	SIO4 * MICROGRM-AT/L
0	23.88	24.94	16.12	1149			3.95 79	1.06	
2.5	23.86	24.96	16.14	1147			3.77 75	1.24	
5.0	23.85	25.03	16.20	1142			3.78 75	1.23	
7.5	23.98	25.12	16.23	1139			3.77 75	1.23	

INTERPULATED		AND COMPUTED		VALUES		AT STANDARD		DEPTH S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 ADU ML/L	SIO4 * MICROGRM-AT/L
0	23.88	24.94	16.12	1149	0		3.95 79	1.06	
2.5	23.86	24.96	16.14	1147	.029		3.77 75	1.24	
5.0	23.85	25.03	16.20	1142	.057		3.78 75	1.23	
7.5	23.98	25.12	16.23	1139	.086		3.77 75	1.23	

GULF OF GUAYAQUIL CRUISE 6414 STATION A-1 LAT. 02 44.2 S LONG. 80 11.5 W DATE 29 JUL 1964
 TIME 1000-1006 WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 23.4 C AIR TEMP.(WET) 19.4 C AIR TEMP.(DRY) 21.7 C
 RELATIVE HUMIDITY 80 O/O BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* OX Y GEN ML/L	* PO4	NO2	SI04
0	23.60	29.18	19.39	834			76	3.74			
5.0	23.56	29.20	19.42	831			74	3.62			
10.0	23.54	29.23	19.44	828			76	3.72			
20.0	23.54	29.49	19.64	810			76	3.70			
30.0	23.47	29.52	19.68	805			76	3.71			
45.0	23.53	29.87	19.93	782			76	3.71			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* OX Y GEN ML/L	* PO4	NO2	SI04
0	23.60	29.18	19.39	834	0		76	3.74			
2.5	23.58	29.19	19.40	832	.021		75	3.68			
5.0	23.56	29.20	19.42	831	.042		74	3.62			
7.5	23.55	29.22	19.43	830	.062		75	3.67			
10.0	23.54	29.23	19.44	828	.083		76	3.72			
15.0	23.54	29.38	19.56	817	.124		76	3.71			
20.0	23.54	29.49	19.64	810	.165		76	3.70			
25.0	23.50	29.51	19.66	807	.205		76	3.71			
30.0	23.47	29.52	19.68	805	.246		76	3.71			

GULF OF GUAYAQUIL CRUISE 6414 STATION D-1 LAT. 02 40.0 S LONG. 80 02.3 W DATE 29 JUL 1964
 TIME 1259- WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 305-315 T
 SECCHI DISK DEPTH 0.8 M SEA TEMP. 24.3 C AIR TEMP. (WET) 20.8 C AIR TEMP. (DRY) 25.0 C
 RELATIVE HUMIDITY 69 0/0 BAROMETER MM

U B S E R V E D		A N D C O M P U T E D		V A L U E S		A T O B S E R V E D		D E P T H S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N G/00 SAT. ML/L	* P O 4	N O 2 S I O 4
0	24.46	26.94	17.46	1020			3.88 79 1.02		
4.0	23.92	29.22	19.33	840			3.19 65 1.69		

I N T E R P O L A T E D		A N D C O M P U T E D		V A L U E S		A T S T A N D A R D		D E P T H S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N G/00 SAT. ML/L	* P O 4	N O 2 S I O 4
0	24.46	26.94	17.46	1020	0		3.88 79 1.02		
2.5	24.11	28.42	18.67	902	.024		3.45 71 1.44		

GULF OF GUAYAQUIL CRUISE 6414 STATION F-1 LAT. 02 44.3 S LONG. 79 54.0 W DATE 29 JUL 1964
 TIME 1410- WEATHER 01 CLOUD COVER 5/10 WIND VELOCITY 1KT (.5 M/SEC) WIND DIR. 295-305 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 24.3 C AIR TEMP.(WET) 21.7 C AIR TEMP.(DRY) 24.9 C
 RELATIVE HUMIDITY 76 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	* MICROGRM-AT/L *	P04	NO2	SI04
0	24.41	28.64	18.75	895			3.86 80 .99				
2.5	24.08	28.78	18.95	876			3.68 75 1.20				
5.0	24.05	28.82	18.99	872			3.68 75 1.20				
7.5	24.07	28.84	19.00	871			3.84 79 1.03				
10.0	24.01	28.95	19.10	862			3.84 79 1.04				
15.0	24.06	28.84	19.00	871			3.84 79 1.04				

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	* MICROGRM-AT/L *	P04	NO2	SI04
0	24.41	28.64	18.75	895	0		3.86 80 .99				
2.5	24.08	28.78	18.95	876	.022		3.68 75 1.20				
5.0	24.05	28.82	18.99	872	.044		3.68 75 1.20				
7.5	24.07	28.84	19.00	871	.066		3.84 79 1.03				
10.0	24.01	28.95	19.10	862	.087		3.84 79 1.04				
15.0	24.06	28.84	19.00	871	.131		3.84 79 1.04				

GULF OF GUAYAQUIL CRUISE 6414 STATION I-1 LAT. 02 53.2 S LONG. 79 55.2 W DATE 29 JUL 1964
 TIME 1527- WEATHER 01 CLOUD COVER 4/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 15- 25 T
 SECCHI DISK DEPTH .5 M SEA TEMP. 24.6 C AIR TEMP.(WET) 22.1 C AIR TEMP.(DRY) 25.7 C
 RELATIVE HUMIDITY 74 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT.	* AOU ML/L	P04	NO2	SIO4
0	24.66	29.51	19.33	839			78	1.08			
2.5	23.90	29.78	19.75	798			71	1.39			
5.0	23.88	29.85	19.81	793			75	1.22			
7.5	23.91	29.96	19.89	786			77	1.12			
10.0	23.83	29.99	19.93	781			76	1.17			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT.	* AOU ML/L	P04	NO2	SIO4
0	24.66	29.51	19.33	839	0		78	1.08			
2.5	23.90	29.78	19.75	798	.020		71	1.39			
5.0	23.88	29.85	19.81	793	.040		75	1.22			
7.5	23.91	29.96	19.89	786	.060		77	1.12			
10.0	23.83	29.99	19.93	781	.080		76	1.17			

GULF OF GUAYAQUIL CRUISE 6414 STATION L-1 LAT. 03 00.2 S LONG. 80 00.5 W DATE 29 JUL 1964
 TIME 1707- WEATHER 02 CLOUD COVER 4/10 WIND VELOCITY 13KT (6.5 M/SEC) WIND DIR. 215-225 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 23.3 C AIR TEMP.(WET) 21.0 C AIR TEMP.(DRY) 22.6 C
 RELATIVE HUMIDITY 88 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	P04 NO2 * MICROGRM-AT/L *	S104
0	23.40	31.49	21.19	661			76 1.15		
2.5	23.14	31.51	21.28	652			76 1.16		
5.0	22.56	32.23	21.98	585			69 1.53		
8.0	22.47	32.27	22.04	579			72 1.38		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	P04 NO2 * MICROGRM-AT/L *	S104
0	23.40	31.49	21.19	661	0		76 1.15		
2.5	23.14	31.51	21.28	652	.016		76 1.16		
5.0	22.56	32.23	21.98	585	.032		69 1.53		
7.5	22.48	32.26	22.03	580	.046		71 1.40		

GULF OF GUAYAQUIL CRUISE 6414 STATION P-1 LAT. 03 08.6 S LONG. 80 04.0 W DATE 30 JUL 1964
 TIME 0700- WEATHER 10/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 265-275 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 22.6 C AIR TEMP.(WET) 19.2 C AIR TEMP.(DRY) 20.2 C
 RELATIVE HUMIDITY 91 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 NO2	SI04
0	22.73	31.89	21.68	614			79 1.01		
2.5	22.56	32.14	21.92	591			68 1.54		
5.0	21.75	33.04	22.82	504			75 1.21		
8.0	21.73	33.15	22.91	496			79 1.05		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PC4 NO2	SI04
0	22.73	31.89	21.68	614	0		79 1.01		
2.5	22.56	32.14	21.92	591	.015		68 1.54		
5.0	21.75	33.04	22.82	504	.029		75 1.21		
7.5	21.73	33.13	22.90	497	.041		78 1.08		

GULF OF GUAYAQUIL CRUISE 6414 STATION R-1 LAT. 03 15.5 S LONG. 80 16.3 W DATE 30 JUL 1964
 TIME 0942- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH 3.5 M SEA TEMP. 22.2 C AIR TEMP.(WET) 19.1 C AIR TEMP.(DRY) 20.1 C
 RELATIVE HUMIDITY 91 0/0 BAROMETER MM

0 B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT. ML/L	* P O 4 ML/L	N O 2	S I O 4
0	22.34	33.06	22.67	519			91 .46			
5.0	21.75	33.64	23.28	461			80 .98			
10.0	21.26	34.18	23.82	409			77 1.12			
15.0	21.00	34.18	23.89	402			72 1.38			
20.0	19.84	34.27	24.27	366			57 2.16			

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT. ML/L	* P O 4 ML/L	N O 2	S I O 4
0	22.34	33.06	22.67	519	0		91 .46			
2.5	22.08	33.35	22.96	491	.013		85 .72			
5.0	21.75	33.64	23.28	461	.025		80 .98			
7.5	21.52	33.85	23.50	440	.036		79 1.05			
10.0	21.26	34.18	23.82	409	.046		77 1.12			
15.0	21.00	34.18	23.89	402	.067		72 1.38			
20.0	19.84	34.27	24.27	366	.086		57 2.16			

GULF OF GUAYAQUIL CRUISE 6414 STATION S-1 LAT. 03 11.9 S LONG. 80 16.3 W DATE 30 JUL 1964
 TIME 1057-1103 WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 4.0 M SEA TEMP. 21.5 C AIR TEMP.(WET) 19.9 C AIR TEMP.(DRY) 21.8 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00 ACU	* P04 ML/L	* MICROGRM-AT/L *	NO2	SIO4
0	21.62	33.30	23.05	482			79	3.90	1.03		
5.0	21.33	33.33	23.16	472			76	3.77	1.19		
10.0	20.89	33.98	23.77	414			70	3.48	1.49		
15.0	20.70	34.05	23.87	404			65	3.25	1.74		
20.0	20.37	34.13	24.02	390			64	3.19	1.82		
30.0	17.47	34.67	25.17	281			25	1.34	3.92		

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00 ACU	* P04 ML/L	* MICROGRM-AT/L *	NO2	SIO4
0	21.62	33.30	23.05	482	0		79	3.90	1.03		
2.5	21.48	33.32	23.10	478	.012		78	3.84	1.11		
5.0	21.33	33.33	23.16	472	.024		76	3.77	1.19		
7.5	21.13	33.43	23.28	460	.036		73	3.63	1.34		
10.0	20.89	33.98	23.77	414	.046		70	3.48	1.49		
15.0	20.70	34.05	23.87	404	.067		65	3.25	1.74		
20.0	20.37	34.13	24.02	390	.087		64	3.19	1.82		
25.0	18.92	34.40	24.60	334	.105		45	2.27	2.87		
30.0	17.47	34.67	25.17	281	.120		25	1.34	3.92		

GULF OF GUAYAQUIL CRUISE 6414 STATION U-1 LAT. 03 05.3 S LONG. 80 16.3 W DATE 30 JUL 1964
 TIME 1141- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 4KT (2.0 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH 1.5 M SEA TEMP. 22.3 C AIR TEMP.(WET) 19.8 C AIR TEMP.(DRY) 21.2 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	P04 ML/L	NO2 ML/L	SI04 ML/L
0	23.43	31.69	21.33	647			91 .43			
2.5	21.41	31.73	21.92	590			74 1.29			
5.0	19.97	33.77	23.85	406			71 1.49			
7.5	20.34	33.89	23.85	407			60 1.99			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	P04 ML/L	NO2 ML/L	SI04 ML/L
0	23.43	31.69	21.33	647	0		91 .43			
2.5	21.41	31.73	21.92	590	.015		74 1.29			
5.0	19.97	33.77	23.85	406	.028		71 1.49			
7.5	20.34	33.89	23.85	407	.038		60 1.99			

GULF OF GUAYAQUIL CRUISE 6414 STATION 10-1 LAT. 03 08.0 S LONG. 80 27.0 W DATE 30 JUL 1964
 TIME 1307-1315 WEATHER 01 CLOUD COVER 7-8/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 265-275 T
 SECCHI DISK DEPTH 12.0 M SEA TEMP. 21.8 C AIR TEMP.(WET) 19.0 C AIR TEMP.(DRY) 20.5 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT.	* AOU ML/L	PO4 NO2 * MICROGRM-AT/L *
0	21.89	34.22	23.68	423			80	.99	
5.0	21.54	34.29	23.83	408			83	.84	
10.0	21.43	34.27	23.84	407			88	.58	
20.0	21.37	34.34	23.91	400			84	.77	
30.0	21.29	34.29	23.90	402			84	.77	
40.0	18.93	34.56	24.72	323			56	2.28	
50.0	16.36	34.88	25.59	240			25	4.01	
I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S									

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00 SAT.	* AOU ML/L	PO4 NO2 * MICROGRM-AT/L *
0	21.89	34.22	23.68	423	0		80	.99	
2.5	21.73	34.25	23.75	416	.010		81	.92	
5.0	21.54	34.29	23.83	408	.021		83	.84	
7.5	21.49	34.28	23.83	408	.031		86	.71	
10.0	21.43	34.27	23.84	407	.041		88	.58	
15.0	21.40	34.30	23.87	404	.062		86	.67	
20.0	21.37	34.34	23.91	400	.082		84	.77	
25.0	21.33	34.31	23.90	401	.102		84	.77	
30.0	21.29	34.29	23.90	402	.122		84	.77	
50.0	16.36	34.88	25.59	240	.186		25	4.01	

GULF OF GUAYAQUIL CRUISE 6414 STATION 9-1 LAT. 03 08.0 S LONG. 80 35.0 W DATE 30 JUL 1964
 TIME 1456- WEATHER 01 CLOUD COVER 5/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 255-265 T
 SECCHI DISK DEPTH 12.0 M SEA TEMP. 22.0 C AIR TEMP.(WET) 19.2 C AIR TEMP.(DRY) 22.0 C
 RELATIVE HUMIDITY 77 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* ML/L	* ML/L	NO2	NO4	SIO4
0	22.15	34.25	23.63	427			87	4.22	.64			
5.0	21.35	34.14	23.77	414			86	4.23	.70			
10.0	21.24	34.16	23.81	410			84	4.17	.77			
20.0	21.19	34.20	23.85	406			84	4.13	.81			
30.0	20.92	34.18	23.91	400			80	3.96	1.00			
40.0	17.83	34.60	25.03	294			41	2.16	3.07			
50.0	15.20	35.05	25.98	203			15	.84	4.64			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* ML/L	* ML/L	NO2	NO4	SIO4
0	22.15	34.25	23.63	427	0		87	4.22	.64			
2.5	21.82	34.15	23.64	426	.011		86	4.22	.67			
5.0	21.35	34.14	23.77	414	.021		86	4.23	.70			
7.5	21.30	34.15	23.79	412	.032		85	4.20	.73			
10.0	21.24	34.16	23.81	410	.042		84	4.17	.77			
15.0	21.22	34.18	23.83	408	.062		84	4.15	.79			
20.0	21.19	34.20	23.85	406	.083		84	4.13	.81			
25.0	21.06	34.19	23.88	403	.103		82	4.05	.91			
30.0	20.92	34.18	23.91	400	.123		80	3.96	1.00			
50.0	15.20	35.05	25.98	203	.184		15	.84	4.64			

GULF OF GUAYAQUIL CRUISE 6414 STATION 8-1 LAT. 03 08.0 S LONG. 80 43.0 W DATE 30 JUL 1964
 TIME 1626- WEATHER 02 CLOUD COVER 5/10 WIND VELOCITY 3KT (1.5 M/SEC) WIND DIR. 245-255 T
 SECCHI DISK DEPTH 12.0 M SEA TEMP. 22.1 C AIR TEMP.(WET) 19.5 C AIR TEMP.(DRY) 21.8 C
 RELATIVE HUMIDITY 81 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN * O/00 SAT. ML/L	* MICROGRM-AT/L *	NO2
0	22.22	34.05	23.46	444			4.23	87	
5.0	21.40	34.18	23.78	413			4.39	89	
10.0	21.04	34.16	23.86	405			4.20	85	
20.0	20.10	34.42	24.31	362			3.63	72	1.40
30.0	19.32	34.54	24.61	334			3.76	74	1.33
40.0	17.06	34.94	25.47	252			2.27	43	3.03
60.0	15.41	34.97	25.88	213			.97	18	4.49
INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN * O/00 SAT. ML/L	* MICROGRM-AT/L *	NO2
0	22.22	34.05	23.46	444	0		4.23	87	
2.5	21.88	34.12	23.60	430	.011		4.31	88	
5.0	21.40	34.18	23.78	413	.021		4.39	89	
7.5	21.23	34.17	23.82	409	.032		4.29	87	
10.0	21.04	34.16	23.86	405	.042		4.20	85	
15.0	20.62	34.24	24.04	388	.062		3.91	78	1.08
20.0	20.10	34.42	24.31	362	.081		3.63	72	1.40
25.0	19.73	34.47	24.45	349	.098		3.70	73	1.37
30.0	19.32	34.54	24.61	334	.116		3.76	74	1.33
50.0	16.15	34.95	25.69	231	.172		1.62	30	3.76

GULF OF GUAYAQUIL CRUISE 6414 STATION 16-1 LAT. 03 18.0 S LONG. 80 27.0 W DATE 30 JUL 1964
 TIME 1841- WEATHER 01 CLOUD COVER 2-3/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH M SEA TEMP. 22.0 C AIR TEMP.(WET) 19.5 C AIR TEMP.(DRY) 20.7 C
 RELATIVE HUMIDITY 90 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	P04 ML/L	NO2 ML/L	SIO4 ML/L
0	22.09	34.02	23.47	443			4.87 100 .00			
5.0	21.67	34.18	23.71	420			4.72 96 .18			
10.0	21.50	34.25	23.81	410			4.46 91 .45			
20.0	20.40	34.36	24.19	374			3.74 75 1.26			
35.0	18.35	34.70	24.97	299			2.40 46 2.78			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT. ML/L	P04 ML/L	NO2 ML/L	SIO4 ML/L
0	22.09	34.02	23.47	443	0		4.87 100 .00			
2.5	21.90	34.10	23.58	432	.011		4.79 98 .09			
5.0	21.67	34.18	23.71	420	.022		4.72 96 .18			
7.5	21.59	34.21	23.75	415	.032		4.59 94 .32			
10.0	21.50	34.25	23.81	410	.042		4.46 91 .45			
15.0	21.03	34.28	23.96	396	.063		4.10 83 .86			
20.0	20.40	34.36	24.19	374	.082		3.74 75 1.26			
25.0	19.76	34.46	24.43	351	.100		3.29 65 1.77			
30.0	19.01	34.59	24.72	323	.117		2.85 56 2.27			

GULF OF GUAYAQUIL CRUISE 6414 STATION 7-1 LAT. 03 08.0 S LONG. 80 51.0 W DATE 31 JUL 1964
 TIME 0847- WEATHER 03 CLOUD COVER 9/10 WIND VELOCITY 2KT (1.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 14.0 M SEA TEMP. 22.5 C AIR TEMP. (WET) 19.3 C AIR TEMP. (DRY) 21.8 C
 RELATIVE HUMIDITY 80 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* P04 NO2 SI04
U	22.62	33.71	23.09	479			91 .45	
5.0	22.60	33.71	23.09	479			89 .53	
10.0	22.47	33.73	23.14	474			91 .46	
20.0	21.46	34.04	23.66	424			82 .88	
30.0	18.72	34.67	24.86	310			56 2.25	
50.0	16.15	35.05	25.77	223			33 3.61	
70.0	14.80	35.16	26.16	187			13 4.79	

INTEGRATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* P04 NO2 SI04
0	22.62	33.71	23.09	479	0		91 .45	
2.5	22.61	33.71	23.09	479	.012		90 .49	
5.0	22.60	33.71	23.09	479	.024		89 .53	
7.5	22.54	33.72	23.12	476	.036		90 .49	
10.0	22.47	33.73	23.14	474	.048		91 .46	
15.0	22.06	33.89	23.38	451	.071		86 .67	
20.0	21.46	34.04	23.66	424	.093		82 .88	
25.0	20.09	34.35	24.27	367	.113		69 1.57	
30.0	18.72	34.67	24.86	310	.130		56 2.25	
50.0	16.15	35.05	25.77	223	.183		33 3.61	

GULF OF GUAYAQUIL CRUISE 6414 STATION 18-1 LAT. 03 09.0 S LONG. 80 21.0 W DATE 31 JUL 1964
 TIME 1235-1312 WEATHER 01 CLOUD COVER 5/10 WIND VELOCITY 8KT (4.0 M/SEC) WIND DIR. 265-275 T
 SECCHI DISK DEPTH 15.0 M SEA TEMP. 22.6 C AIR TEMP.(WET) 19.4 C AIR TEMP.(DRY) 21.0 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X ML/L	Y G E N * O/00 SAT.	ML/L	ADU	P04	N02	SIO4
0	22.64	33.91	23.23	465			4.34	90		.49			
5.0	22.23	33.86	23.31	458			4.34	89		.53			
10.0	22.09	33.93	23.40	449			4.35	89		.52			
20.0	20.47	33.89	23.81	410			4.34	87		.67			
30.0	18.20	34.33	24.73	322			3.20	61		2.01			
50.0	15.15	34.74	25.76	225			1.64	30		3.86			
75.0	15.10	35.17	26.10	192			1.63	30		3.86			
100.0	14.80	35.16	26.16	187			1.16	21		4.36			

I N T E R P O L A T E D		A N D		C O M P U T E D		V A L U E S		A T		S T A N D A R D		D E P T H S	
DEPTH	TEMP.	SAL.	SIG-T	THERMO	DYNAMIC	TOTAL	* O X	Y G E N	* P O 4	N O 2	S I O 4		
METERS	DEG C	O/00	G/L	ANOMALY	HEIGHT	CO2	ML/L	SAT.	ML/L	# MICROGRM-AT/L			
				CL/T		MGC/M3							
0	22.64	33.91	23.23	465	0		4.34	90	.49				
2.5	22.45	33.88	23.27	462	.012		4.34	90	.51				
5.0	22.23	33.86	23.31	458	.023		4.34	89	.53				
7.5	22.16	33.88	23.35	454	.035		4.34	89	.52				
10.0	22.09	33.93	23.40	449	.046		4.35	89	.52				
15.0	21.45	33.91	23.56	434	.068		4.34	88	.60				
20.0	20.47	33.89	23.81	410	.089		4.34	87	.67				
25.0	19.33	34.11	24.27	366	.108		3.77	74	1.34				
30.0	18.20	34.33	24.73	322	.126		3.20	61	2.01				
50.0	15.15	34.74	25.76	225	.181		1.64	30	3.86				
75.0	15.10	35.17	26.10	192	.233		1.63	30	3.86				
100.0	14.80	35.16	26.16	187	.281		1.16	21	4.36				

GULF OF GUAYAQUIL CRUISE 6414 STATION 19-1 LAT. 03 08.0 S LONG. 81 17.0 W DATE 31 JUL 1964
 TIME 1618-1624 WEATHER 03 CLOUD COVER 9/10 WIND VELOCITY 16KT (8.0 M/SEC) WIND DIR. 205-215 T
 SECCHI DISK DEPTH 6.0 M SEA TEMP. 19.9 C AIR TEMP.(WET) 18.0 C AIR TEMP.(DRY) 19.1 C
 RELATIVE HUMIDITY 92 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS											
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX ML/L	YGEN O/00 SAT.	* AOU ML/L	P04 NO2	SIO4
0	19.96	34.74	24.59	335			5.17	103	-.14		
5.0	19.46	34.61	24.62	332			4.98	98	.10		
10.0	19.05	34.74	24.83	313			4.93	96	.18		
20.0	15.60	35.14	25.96	205			1.89	35	3.55		
30.0	14.85	35.14	26.13	189			1.67	30	3.85		
55.0	14.62	35.23	26.25	178			1.46	26	4.08		
80.0	14.55	35.12	26.18	184			1.45	26	4.10		
105.0	14.46	35.17	26.24	179			1.42	26	4.14		
150.0	14.27	35.10	26.23	180			1.40	25	4.19		
200.0	14.09	35.16	26.31	172			.99	18	4.61		
300.0	11.14	34.96	26.74	132			.21	4	5.76		
400.0											
500.0	8.87	34.88	27.06	101			.65	10	5.64		

I N T E R P O L A T E D		A N D		C O M P U T E D		V A L U E S		A T		S T A N D A R D		D E P T H S	
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG- G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* ML/L	O X ML/L	Y G E N O/00	* ML/L	PO4	NO2	SI04
									SAT.		* MICROGRM-AT/L		*
0	19.96	34.74	24.59	335	0		5.17	103	-0.14				
2.5	19.74	34.68	24.60	335	.008		5.07	100	-0.02				
5.0	19.46	34.61	24.62	332	.017		4.98	98	.10				
7.5	19.27	34.68	24.72	323	.025		4.95	97	.14				
10.0	19.05	34.74	24.83	313	.033		4.93	96	.18				
15.0	17.32	34.94	25.41	258	.047		3.41	66	1.86				
20.0	15.60	35.14	25.96	205	.059		1.89	35	3.55				
25.0	15.19	35.14	26.06	196	.069		1.78	33	3.70				
30.0	14.85	35.14	26.13	189	.079		1.67	30	3.85				
50.0	14.66	35.22	26.23	180	.116		1.50	27	4.03				
75.0	14.56	35.14	26.19	183	.161		1.45	26	4.10				
100.0	14.48	35.16	26.23	180	.208		1.43	26	4.13				
150.0	14.27	35.10	26.23	180	.299		1.40	25	4.19				
200.0	14.09	35.16	26.31	172	.390		.99	18	4.61				
250.0	12.47	35.04	26.54	150	.474		.60	11	5.19				
300.0	11.14	34.96	26.74	132	.547		.21	4	5.76				
400.0	9.86	34.91	26.92	114	.678		.43	7	5.70				
500.0	8.87	34.88	27.06	101	.795		.65	10	5.64				

GULF OF GUAYAQUIL CRUISE 6414 STATION 13-1 LAT. 03 34.0 S LONG. 80 51.0 W DATE 31 JUL 1964
 TIME 2021-2032 WEATHER CLOUD COVER WIND VELOCITY 12KT (6.0 M/SEC) WIND DIR. 215-225 T
 SECCHI DISK DEPTH M SEA TEMP. 22.0 C AIR TEMP.(WET) 19.0 C AIR TEMP.(DRY) 20.0 C
 RELATIVE HUMIDITY 91 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AUU ML/L	NO2 MICROGRM-AT/L *
0	22.19	34.00	23.43	447			93	.33	
5.0	22.18	34.02	23.44	445			88	.56	
10.0	21.47	34.13	23.72	418			84	.79	
20.0	20.95	34.31	24.00	392			83	.84	
30.0	20.34	34.49	24.30	363			77	1.15	
50.0	15.53	35.05	25.91	210			21	4.28	

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS									
DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* OX Y GEN O/00 SAT. ML/L	* PO4 AUU ML/L	NO2 MICROGRM-AT/L *
0	22.19	34.00	23.43	447	0		93	.33	
2.5	22.19	34.01	23.43	446	.011		91	.45	
5.0	22.18	34.02	23.44	445	.022		88	.56	
7.5	21.88	34.08	23.57	433	.033		86	.68	
10.0	21.47	34.13	23.72	418	.044		84	.79	
15.0	21.23	34.19	23.84	407	.065		84	.81	
20.0	20.95	34.31	24.00	392	.085		83	.84	
25.0	20.66	34.38	24.13	379	.104		80	1.00	
30.0	20.34	34.49	24.30	363	.123		77	1.15	
50.0	15.53	35.05	25.91	210	.180		21	4.28	

GULF OF GUAYAQUIL CRUISE 6414 STATION 14-1 LAT. 03 29.0 S LONG. 80 43.0 W DATE 31 JUL 1964
 TIME 2252- WEATHER CLOUD COVER WIND VELOCITY 16KT (8.0 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH M SEA TEMP. 22.3 C AIR TEMP.(WET) 19.2 C AIR TEMP.(DRY) 20.5 C
 RELATIVE HUMIDITY 88 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00	PO4	NO2	SI04
0	22.47	33.82	23.21	467			SAT. ML/L			* MICROGRM-AT/L *
							85			.72
5.0	22.47	33.80	23.20	469			86			.67
10.0	22.34	33.77	23.21	467			86			.67
20.0	21.67	34.11	23.65	425			85			.73
35.0	20.97	34.23	23.94	398			80			1.01

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00	PO4	NO2	SI04
0	22.47	33.82	23.21	467	0		SAT. ML/L			* MICROGRM-AT/L *
							85			.72
2.5	22.47	33.81	23.20	468	.012		86			.69
5.0	22.47	33.80	23.20	469	.023		86			.67
7.5	22.41	33.78	23.20	468	.035		86			.67
10.0	22.34	33.77	23.21	467	.047		86			.67
15.0	22.00	33.94	23.43	446	.070		86			.70
20.0	21.67	34.11	23.65	425	.091		85			.73
25.0	21.39	34.16	23.77	414	.113		83			.83
30.0	21.16	34.20	23.86	405	.133		81			.92

GULF OF GUAYAQUIL CRUISE 6414 STATION 5-1 LAT. 02 52.0 S LONG. 80 51.0 W DATE 2 AUG 1964
 TIME 0949- WEATHER 03 CLOUD COVER 10/10 WIND VELOCITY 7KT (3.5 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH 12.0 M SEA TEMP. 22.6 C AIR TEMP.(WET) 19.5 C AIR TEMP.(DRY) 21.0 C
 RELATIVE HUMIDITY 87 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT.	ML/L	* MICROGRM-AT/L *	P04	NO2	SI04
0	22.73	33.73	23.07	481			93	4.49	.34			
5.0	22.75	33.75	23.08	480			91	4.39	.44			
10.0	22.69	33.77	23.11	477			90	4.33	.50			
20.0	22.65	33.69	23.06	481			88	4.28	.56			
30.0	21.79	34.07	23.59	431			90	4.42	.47			
50.0	15.41	35.01	25.91	210			23	1.26	4.20			
70.0	14.69	35.08	26.12	190			14	.78	4.76			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00 SAT.	ML/L	* MICROGRM-AT/L *	P04	NO2	SI04
0	22.73	33.73	23.07	481	0		93	4.49	.34			
2.5	22.74	33.74	23.08	480	.012		92	4.44	.39			
5.0	22.75	33.75	23.08	480	.024		91	4.39	.44			
7.5	22.72	33.76	23.10	478	.036		90	4.36	.47			
10.0	22.69	33.77	23.11	477	.048		90	4.33	.50			
15.0	22.67	33.72	23.08	479	.072		89	4.30	.53			
20.0	22.65	33.69	23.06	481	.096		88	4.28	.56			
25.0	22.29	33.84	23.27	461	.120		89	4.35	.52			
30.0	21.79	34.07	23.59	431	.142		90	4.42	.47			
50.0	15.41	35.01	25.91	210	.206		23	1.26	4.20			

GULF OF GUAYAQUIL CRUISE 6414 STATION 1-1 LAT. 02 36.0 S LONG. 80 51.0 W DATE 2 AUG 1964
 TIME 1310- WEATHER 02 CLOUD COVER 10/10 WIND VELOCITY 15KT (7.5 M/SEC) WIND DIR. 225-235 T
 SECCHI DISK DEPTH 12.0 M SEA TEMP. 23.1 C AIR TEMP.(WET) 18.4 C AIR TEMP.(DRY) 20.2 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * O/00	SAT. ML/L	* MICROGRM-AT/L *	P04	N02	S104
0	23.17	33.53	22.79	507			86	.69				
5.0	23.18	33.53	22.79	507			91	.42				
10.0	23.12	33.48	22.77	509			90	.47				
20.0	23.04	33.40	22.73	513			89	.53				
30.0	22.58	33.71	23.10	478			88	.58				
50.0	15.57	35.01	25.87	214			24	4.15				
70.0	15.17	35.08	26.01	200			23	4.25				

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * O/00	SAT. ML/L	* MICROGRM-AT/L *	P04	N02	S104
0	23.17	33.53	22.79	507	0		86	.69				
2.5	23.18	33.53	22.79	507	.013		88	.55				
5.0	23.18	33.53	22.79	507	.025		91	.42				
7.5	23.15	33.50	22.78	509	.038		91	.44				
10.0	23.12	33.48	22.77	509	.051		90	.47				
15.0	23.08	33.44	22.75	511	.076		90	.50				
20.0	23.04	33.40	22.73	513	.102		89	.53				
25.0	22.83	33.52	22.88	499	.127		88	.56				
30.0	22.58	33.71	23.10	478	.152		88	.58				
50.0	15.57	35.01	25.87	214	.221		24	4.15				

GULF OF GUAYAQUIL CRUISE 6414 STATION 2-1 LAT. 02 41.0 S LONG. 80 43.0 W DATE 2 AUG 1964
 TIME 1430- WEATHER 01 CLOUD COVER 9/10 WIND VELOCITY 12KT (6.0 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH 15.0 M SEA TEMP. 23.1 C AIR TEMP.(WET) 19.0 C AIR TEMP.(DRY) 20.7 C
 RELATIVE HUMIDITY 84 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. 0/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N * 0/00	P04 AQU	N02 ML/L	SIO4 * MICROGRM-AT/L *
0	23.23	33.48	22.74	512			90		.49	
5.0	23.24	33.57	22.80	506			89		.52	
10.0	23.16	33.55	22.81	505			89		.54	
15.0	23.19	33.46	22.73	513			91		.42	
25.0	22.96	33.57	22.88	499			90		.50	

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. 0/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N * 0/00	P04 AQU	N02 ML/L	SIO4 * MICROGRM-AT/L *
0	23.23	33.48	22.74	512	0		90		.49	
2.5	23.24	33.54	22.78	508	.013		89		.51	
5.0	23.24	33.57	22.80	506	.025		89		.52	
7.5	23.20	33.56	22.81	506	.038		89		.53	
10.0	23.16	33.55	22.81	505	.051		89		.54	
15.0	23.19	33.46	22.73	513	.076		91		.42	
20.0	23.07	33.51	22.81	506	.102		90		.46	
25.0	22.96	33.57	22.88	499	.127		90		.50	

GULF OF GUAYAQUIL CRUISE 6414 STATION 3-1 LAT. 02 46.0 S LONG. 80 35.0 W DATE 2 AUG 1964
 TIME 1537- WEATHER 01 CLOUD COVER 6/10 WIND VELOCITY 15KT (7.5 M/SEC) WIND DIR. 235-245 T
 SECCHI DISK DEPTH 15.0 M SEA TEMP. 23.0 C AIR TEMP.(WET) 19.6 C AIR TEMP.(DRY) 21.6 C
 RELATIVE HUMIDITY 83 0/0 BAROMETER MM

OBSERVED AND COMPUTED VALUES AT OBSERVED DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N O/00	SAT. ML/L	* MICROGRM-AT/L	P04	NO2	SI04
0	23.47	33.55	22.72	514				90	.46			
5.0	23.15	33.51	22.78	508				90	.47			
10.0	23.04	33.53	22.83	504				93	.36			
15.0	22.94	33.55	22.87	499				88	.56			
20.0	22.60	33.75	23.12	476				92	.39			

INTERPOLATED AND COMPUTED VALUES AT STANDARD DEPTHS

DEPTH METERS	TEMP. DEG C	SAL. O/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N O/00	SAT. ML/L	* MICROGRM-AT/L	P04	NO2	SI04
0	23.47	33.55	22.72	514	0			90	.46			
2.5	23.32	33.53	22.75	511	.013			90	.46			
5.0	23.15	33.51	22.78	508	.026			90	.47			
7.5	23.10	33.52	22.80	506	.038			91	.42			
10.0	23.04	33.53	22.83	504	.051			93	.36			
15.0	22.94	33.55	22.87	499	.076			88	.56			
20.0	22.60	33.75	23.12	476	.100			92	.39			

GULF OF GUAYAQUIL CRUISE 6414 STATION 4-1 LAT. 02 52.0 S LONG. 80 27.0 W DATE 2 AUG 1964
 TIME 1700- WEATHER 01 CLOUD COVER 5/10 WIND VELOCITY 5KT (2.5 M/SEC) WIND DIR. 235-245 T
 SFCCHL WISK DEPTH 11.0 M SEA TEMP. C AIR TEMP.(WET) 20.2 C AIR TEMP.(DRY) 22.5 C
 RELATIVE HUMIDITY 82 0/0 BAROMETER MM

U B S E R V E D A N D C O M P U T E D V A L U E S A T O B S E R V E D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. 0/00	SIG-T G/L	THERMO ANOMALY CL/T	PH	TOTAL CO2 MGC/M3	* O X Y G E N 0/00 SAT.	* ML/L	* ML/L	PO4	NO2	SI04
0	22.94	33.75	23.03	485			92	.37				
5.0	22.97	33.78	23.04	484			89	.54				
10.0	22.49	33.87	23.24	464			89	.52				
15.0	22.51	33.84	23.22	467			92	.38				

I N T E R P O L A T E D A N D C O M P U T E D V A L U E S A T S T A N D A R D D E P T H S

DEPTH METERS	TEMP. DEG C	SAL. 0/00	SIG-T G/L	THERMO ANOMALY CL/T	DYNAMIC HEIGHT	TOTAL CO2 MGC/M3	* O X Y G E N 0/00 SAT.	* ML/L	* ML/L	PO4	NO2	SI04
0	22.94	33.75	23.03	485	0		92	.37				
2.5	22.96	33.76	23.03	484	.012		91	.45				
5.0	22.97	33.78	23.04	484	.024		89	.54				
7.5	22.73	33.82	23.14	474	.036		89	.53				
10.0	22.49	33.87	23.24	464	.048		89	.52				
15.0	22.51	33.84	23.22	467	.071		92	.38				

An important phase of the scientific work of the **Inter-American Tropical Tuna Commission** is the publication of research results. The Commission publishes studies by its staff and by co-operating scientists in its *Bulletin* series, in both English and Spanish.

The Commission also publishes, in these languages, the Annual Report of the Inter-American Tropical Tuna Commission. In the Annual Report are reported the actions of the Commission, a review of the year's work carried out under the direction of the Commission, a roster of scientific staff, and a listing of all publications issued during the preceding calendar year.

Bulletins, Annual Reports, and papers published by the staff in other journals are distributed on an exchange basis to a selected international list of governmental organizations, official libraries and laboratories and interested members of the scientific community. Requests for these publications, as well as for a listing of all publications, may be directed to The Editor.

Some recent publications in the *Bulletin* series are:

Vol. 12, No. 3

Fishery dynamics and present status of the yellowfin tuna population of the eastern Pacific Ocean, by Milner B. Schaefer. La Jolla, 1967.

La dinámica de la pesquería y el estado corriente de la población del atún aleta amarilla en el Océano Pacífico oriental, por Milner B. Schaefer. La Jolla, 1967.

Vol. 12, No. 4

An annotated bibliography on the biology and fishery of the skipjack tuna, *Katsuwonus pelamis*, of the Pacific Ocean, by Witold L. Klawe and Makoto Peter Miyake. La Jolla, 1967.

Bibliografía anotada sobre la biología y la pesca del barrilete, *Katsuwonus pelamis*, del Océano Pacífico, por Witold L. Klawe y Makoto Peter Miyake. La Jolla, 1967.

Vol. 12, No. 5

Growth, mortality, and exploitation of Engraulidae, with special reference to the anchoveta, *Cetengraulis mysticetus*, and the colorado, *Anchoa naso*, in the eastern Pacific Ocean, by William H. Bayliff. La Jolla, 1967.

Crecimiento, mortalidad y explotación de los Engraulidae, con referencia especial a la anchoveta, *Cetengraulis mysticetus*, y el colorado, *Anchoa naso*, en el Océano Pacífico oriental, por William H. Bayliff. La Jolla, 1967.

Una fase importante del trabajo científico de la **Comisión Interamericana del Atún Tropical** es la publicación de los resultados de sus investigaciones. La Comisión publica tanto en inglés como en español, los estudios efectuados por su personal y por científicos que cooperan en su serie de *Boletines*.

La Comisión también publica en estos idiomas, el Informe Anual de la Comisión Interamericana del Atún Tropical. En el Informe Anual, se participa sobre las acciones de la Comisión; una revisión del trabajo llevado a cabo durante el año bajo la dirección de la Comisión; un registro del personal científico y una lista de todas las publicaciones editadas durante el año calendario anterior.

Los Boletines, Informes Anuales y artículos publicados por el personal en otras revistas, se distribuyen, a base de intercambio, a una lista internacional escogida de organizaciones gubernamentales, bibliotecas oficiales, laboratorios y personas interesadas de la comunidad científica. Los pedidos para estas publicaciones, lo mismo que de la lista de todas las ediciones, deben ser dirigidos al Editor.

Las publicaciones recientes en la serie de *Boletines* son: